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RESULTS OBTAINED IN THE TRANSMISSION OF DENGUE FEVER *

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AND
A. P. HITCHENS, M.D.

Lieutenant Colonel, Major and Major, Respectively, Medical Corps, U. S. Army; Members of the U. S. Army Medical Department Research Board

WASHINGTON, D. C.

The Medical Department Research Board of the United States Army and other workers closely associated therewith are investigating a number of the unsolved problems relating to dengue fever, including its etiology, mechanism of transmission by insects, duration of immunity following an attack, and clinical characteristics. The results will be reported fully at a later date, and published in the *Philippine Journal of Science*, Bureau of Science, Manila, P. I.

It is our purpose in this summary to present briefly the results of a fairly large series of experiments relating to the transmission of dengue fever by mosquitoes. This work has been done in Manila, during the last few months, from July, 1924, to January, 1925, inclusive.

A total of forty-two American soldiers volunteered for these experiments. Eighty-three biting experiments have been made with potentially infected female *Culex quinquefasciatus* (*C. fatigans*) and *Aedes egypti* (*Stegomyia fasciata*), and dengue fever has been transmitted experimentally by mosquitoes in twenty-five instances.

PREVIOUS EXPERIMENTAL WORK

So far as can be ascertained from the literature, the following results pertinent to this discussion have been obtained in the transmission of dengue fever by mosquitoes:

Graham [1] of Beyrouth, Syria, in 1903, reported its transmission by *Culex quinquefasciatus*. A review of his original report indicates that the experiments were not carefully controlled, and it is evident that he was working with *Aedes egypti* as well as *C. quinquefasciatus*.

Ashburn and Craig,[2] working in Manila, in 1906, reported one experiment on a volunteer that suggested transmission by *C. quinquefasciatus*. They stated, however, that their experimental work with mosquitoes was quite incomplete and required confirmation.

Cleland and Bradley,[3] working in Sydney, Australia, in 1916, report the production of dengue experimentally in four volunteers by subjecting them to the bites of infected female *Aedes egypti*. The mosquitoes used by them were a mixed lot, consisting of laboratory bred insects that were allowed to bite dengue patients in various stages of the disease, and wild mosquitoes caught in infected houses. They demonstrated quite definitely that *A. egypti* was a transmitter. Their investigations throw no light on the developmental period of the virus in the mosquito.

UNSOLVED PROBLEMS COVERED BY THE EXPERIMENTAL WORK OF THIS BOARD

The experimental work incorporated in this report covers the following points:

1. Confirmation of the results obtained by Cleland and Bradley relative to the transmission of dengue by *A. egypti*.
2. Time interval after the appearance of the initial symptoms, during which the dengue patient continues to be infective to mosquitoes.
3. Length of time the dengue virus must remain in the infected mosquito before transmission becomes possible.
4. Length of time infected mosquitoes are capable of transmitting dengue.
5. Incrimination or elimination of *C. quinquefasciatus* as a possible transmitting agent.
6. Incubation period of dengue in the human subject; number of mosquitoes used in each experiment; immunity to dengue.

GENERAL PLANS ADOPTED IN CARRYING OUT EXPERIMENTS

The experimental work was carried out at Manila in the laboratories of the Research Board in the Bureau of Science and in an experimental dengue fever ward (Ward 16) at the Sternberg General Hospital. As the amount of space available in the experimental ward was limited, the problems were taken up step by step with a view to establishing one fact at a time. Each basic experiment was discussed and planned in conference, before its initiation. These conferences were attended by the members of the board and at times by certain members of the staff of the Bureau of Science. Mr. W. Schultze, chief of the Division of Entomology of the Bureau of Science, acted as consulting entomologist, and specifically identified the various lots of mosquitoes used in the experiments.[4]

---

* From the U. S. Army Medical Department Research Board, Manila, P. I., Laboratories, Bureau of Science, and Sternberg General Hospital, U. S. Army, Manila.

1. Graham, H.: The Dengue, a Study of Its Pathology and Mode of Propagation, J. Trop. Med. **6**: 209-214, 1903.
2. Ashburn, P. M., and Craig, C. F.: Experimental Investigations Regarding the Etiology of Dengue Fever, etc., Philippine J. Sc. (B. Med. Series) **2**: 93-152, 1907.
3. Cleland, J. B.; Bradley, Burton; and McDonald, W.: Dengue Fever in Australia, J. Hyg. **16**: 317-418, 1918.
4. The members of the board are indebted to Dr. A. E. Truby, Colonel, M. C., U. S. Army, surgeon Philippine Department, formerly chief sanitary officer, Panama Canal Zone; Dr. Otto Schöbel, chief of biologic laboratories, Bureau of Science; Dr. A. W. Sellards, Harvard University, temporarily working at the bureau, and Dr. George R. Lacy International Health Board, temporarily serving at the Bureau of Science for suggestions in planning the experimental work, and for their cooperation and advice throughout the investigation.

MOSQUITOES USED AND TECHNIC ADOPTED

Every effort was made to eliminate the factor of chance, and all mosquitoes used in the experimental work were bred from eggs. The series of experiments to be carried out presupposed the availability of large numbers of mosquitoes at all times, and during the early months of 1924 one member of the board undertook the development of breeding methods that would assure the maximum yield of adult mosquitoes from a given number of eggs. This preliminary work was completed in a period of about three months, and, in general, the breeding technic adopted assured a yield of 75 per cent. or more adult *Aedes egypti*, and from 25 to 50 per cent. of *C. quinquefasciatus*.

The technic adopted in handling *Aedes egypti* was as follows:

A large number of *Aedes egypti* of both sexes (females predominating) were kept in a breeding cage and allowed to take blood at frequent intervals. Fruit jars and open Petri dishes containing water were kept in the breeding cage as receptacles for the deposit of batches of eggs. An open Petri dish containing an aqueous solution of sugar (frequently changed) provided the necessary additional food. As batches of eggs were laid, the jars were transferred to smaller breeding cages in which the development from egg to imago took place. These small breeding cages were inspected daily and all adults removed in test tubes—rubber gloves being used to prevent the female from taking blood. The adults were then placed in a "reserve" cage, from which the females were withdrawn for experimental use. The females in the reserve cage were provided with adequate supplies of food (aqueous solution of sugar) and water. They were not allowed to feed on blood from the date of emergence as imagos until used for experimental purposes.

When "a lot" of mosquitoes was required for biting purposes, an assistant placed in the "reserve" cage the necessary number of test tubes lightly plugged with cotton, introduced his rubber-gloved hand, and caught the required number of females, one in each test tube. Each mosquito was then inspected to check sex and species. The entire lot was then turned over to Mr. Schultze, entomologist of the Bureau of Science, for confirmation of specific determination. The mosquitoes were then transferred to biting cages (wooden framework covered with fine netting and having a net sleeve at one end).

The biting cage was then taken to the hospital and applied to the leg of the patient to be bitten. When the feeding of blood was completed, the number of mosquitoes present was checked, and the cage was returned to the laboratory, where the number was again verified and all females with stomachs not completely distended with blood were removed and killed. The latter precaution eliminated the possibility of dealing with unfed females in the subsequent biting experiments on volunteers. During the period of time intervening between the initial infection of the mosquitoes and their application to volunteers for experimental purposes, they were fed on aqueous solutions of sucrose and water, both of which were changed every two days.

The biting experiments with *Aedes egypti* usually were carried out during the morning hours, between 9 and 11:30. This species bites freely in Manila throughout the daylight hours.

The method adopted for breeding and handling *C. quinquefasciatus* was quite similar to that described for handling *A. egypti*, with the following exceptions:

The eggs used were not laid by adults in captivity, but were secured from stagnant pools, and the biting experiments were carried out during the night rather than during daylight hours. This species is somewhat difficult to handle, as the females are very erratic in their biting habits, and the mortality rate is high after the second and third feeding on blood.

Actually, many thousands of mosquitoes were used, and the fact that they were always available when required was due to the efficiency and attention to detail exhibited by the technical assistants in general charge of their breeding and handling.[5]

PRECAUTIONS TAKEN TO PREVENT EXTRANEOUS INFECTION OF VOLUNTEERS

As dengue fever is an endemic disease in Manila, it was necessary to take extraordinary precautions to prevent the infection of volunteers by infected mosquitoes from extraneous sources. Drs. C. F. Morse and W. H. Moncrief, Lieutenant-Colonels, M. C., commanding officers, successively, of Sternberg General Hospital, cooperated by assigning to the board a screened hospital ward having a capacity of fifteen patients, and with adequate toilet and bathing facilities within the ward. The screens were inspected minutely, and necessary repairs were made. All other openings were either screened or sealed, and window screens were nailed in place. Entry to the ward was through screened vestibules. The insides of vestibules and doors were painted white, and the ward was entered through a barrier of four doors, all opening outward.

As a preliminary measure, the entire ward was sealed and fumigated with sulphur, the fumes of which were allowed to remain from 4 to 9 p. m. The efficiency of the fumigation was checked by the introduction of two cages of mosquitoes, a cage being placed at each end of the ward, before ignition of the sulphur.

The commanding officer of the hospital supplied a specially selected personnel to administer the ward, consisting of a nurse of the Army Nurse Corps, one to two ward assistants (members of the Medical Department Detachment) for day duty, and one ward master for night duty.[6]

Vestibules, dark corners and the under surfaces of tables, chairs, etc., were inspected minutely at frequent intervals each day by the nurse and corpsmen for the purpose of detecting mosquitoes that might possibly have gained entrance. During the latter half of the period covered by the experiments, the additional precaution was taken of installing an electric fan, the draft from which was directed toward the outer screened door.

METHOD OF SELECTION OF VOLUNTEERS AND RESTRICTIONS REQUIRED OF THEM

The mortality rate of dengue fever in the Philippines is nil, but its morbidity rate for American troops serving in this department is and always has been high. The purpose of the experimental work was to secure information that might be of practical value to the military authorities in the prevention of the disease in military commands, and the members of the board felt that there was ample justification in calling for volunteers from military organizations.

In selecting volunteers, the following specifications were laid down:

1. Freedom from disease.
2. Short residence in the tropics, preferably less than three months.
3. Previous residence in the United States in geographic areas where dengue fever had never occurred as an endemic or epidemic disease.
4. No record of admission to hospital for dengue fever and a negative medical history suggestive of a previous attack.

5. To Private First Class Jesse F. Rhodes (Lab. Spec., Second Class), Med. Dept., and Private First Class Bonifacio Reyes, Med. Dept. (in charge of Aedes breeding), in particular, is due much of the credit for the successful accomplishment of these results.

6. The members of the board are indebted to Miss Ruby Nichols and Miss Mildred P. Carter, Army Nurse Corps, successively charged with the administration of the ward, for the faithfulness and vigilance exhibited by them, particularly in preventing the entry of mosquitoes into the ward.

5. Negative history, examination for syphilis, and a negative Wassermann test repeated twice.

The volunteers used conformed, in general, to these requirements, though there were occasional minor deviations therefrom. Once a volunteer entered the experimental ward, he was not allowed to leave it until discharged or transferred to the regular dengue fever ward of the hospital. The ward personnel (nurse or assistant) was on duty in the experimental ward day and night to insure compliance with existing regulations. Throughout his stay in this ward, the volunteer was handled in the same manner as a hospital patient—temperature, pulse and respiration were taken three times daily, and routine laboratory examinations made.

No experimental work was undertaken on the volunteer until the completion of a preliminary period of isolation to exclude the possibility of infection with dengue prior to admission. This preliminary isolation nosis, it was decided that the diagnosis would be left to the judgment of an experienced clinician. Dr. P. C. Riley, Major, M. C., who was in charge of the dengue ward at Sternberg General Hospital, and who had made a special clinical study of hundreds of cases of dengue fever, was selected as clinical consultant, and all cases of experimental dengue reported in this series were so diagnosed by him.

Where elevation of temperature and subjective symptoms suggestive of dengue occurred in volunteers, Dr. Riley was called in to make the diagnosis, and all positively diagnosed cases were immediately transferred to the regular dengue fever ward (Ward 5) of the hospital.

RESULTS OBTAINED

In conducting the experimental work the general policy was followed, in each set of experiments, of using, successively, all available methods for the produc-

TABLE 1.—*Experimental Evidence Demonstrating That Aedes Egypti Mosquitoes (Stegomyia Fasciatus) Transmit Dengue Fever*

Data on Experimental Subject				Data on Mosquitoes Used in Experiment			Data on Infection of Experimental Mosquitoes			Data on Biting of Volunteers by Infected Mosquitoes			Results		
														Data on Positive Cases	
Experimental Case No.	Volunteer	Date Admitted to Experimental Ward 1924	Number Days in Isolation or Since Bitten by Mosquitoes	Serial Number of Lot	Kind	Total Number in Lot	Volunteer Used to Infect Mosquitoes	Day of Dengue in Patient	Date Mosquitoes Were Infected 1924	Date Volunteer Was Bitten 1924	No. of Females That Took Blood	No. of Days Virus Had Remained in Mosquitoes	Positive or Negative	Date Initial Symptoms Appeared 1924	Incubation Period in Days
A-12	Yarch.....	Sept. 12	13	551	A. egypti	10	Richards—B-3....	1	Sept. 17	Oct. 12	10	25	Pos.	Oct. 16	4½
A-13	Crone.....	Sept. 12	13	552	A. egypti	20	Reed—B-1.....	1	Sept. 17	Oct. 12	20	25	Pos.	Oct. 16	4½
A-18	Ables.....	Sept. 19	12	551	A. egypti	8	Reed—B-1.....	1	Sept. 17	Oct. 16	4	29	Pos.	Oct. 22	6
				552	A. egypti	..	Richards—B-3								
A-20	Alexander..	Sept. 19	15	551	A. egypti	2	Richards—B-3....	1	Sept. 17	Oct. 23	2	36	Pos.	Oct. 28	5½
				552	A. egypti	..	Reed—B-1								
A-26	Carter.....	Oct. 20	11	663	A. egypti	10	Siler.....	1	Oct. 17	Oct. 31	8	14	Pos.	Nov. 5	5
A-27	Sparks.....	Oct. 20	11	664	A. egypti	10	Yarch—A-12.....	1	Oct. 17	Oct. 31	7	14	Pos.	Nov. 7	7
A-28	Kibbe.....	Oct. 20	11	665	A. egypti	6	Crone—A-13.....	1	Oct. 17	Oct. 31	6	14	Pos.	Nov. 7	7
A-33	Swaen.....	Oct. 20	15	663	A. egypti	8	Siler.....	1	Oct. 17	Nov. 4	7	18	Pos.	Nov. 9	5½
A-34	Cain.....	Oct. 20	15	664	A. egypti	6	Yarch—A-12.....	1	Oct. 17	Nov. 4	5	18	Pos.	Nov. 8	4½
A-35	Caron.....	Oct. 20	15	665	A. egypti	6	Crone—A-13.....	1	Oct. 17	Nov. 4	4	18	Pos.	Nov. 8	4½
A-40	Watkins....	Oct. 20	6	687	A. egypti	6	Ables—A-18.....	1	Oct. 22	Nov. 7	6	16	Pos.	Nov. 16	9
A-46	Eckenroad.	Oct. 20	8	694	A. egypti	27	Alexander—A-20.	1	Oct. 29	Nov. 15	25	17	Pos.	Nov. 19	4⅛
A-48	Byan.....	Nov. 13	10	724	A. egypti	24	Watkins—A-40...	1	Nov. 17	Nov. 29	10	12	Pos.	Dec. 7	8
A-50	Riggs.....	Nov. 13	17	725	A. egypti	44	Eckenroad—A-46	1	Nov. 19	Nov. 30	34	11	Pos.	Dec. 6	6
A-52	Dembowski	Oct. 20	7	714	A. egypti	24	Carter—A-26.....	1	Nov. 6	Nov. 24	18	18	Pos.	Dec. 1	7
A-53	Squires.....	Nov. 11	10	694	A. egypti	15	Alexander—A-20.	1	Oct. 29	Nov. 30	13	31	Pos.	Dec. 5	5
A-54	White.....	Nov. 11	10	717	A. egypti	31	Kibbe—A-28.....	1	Nov. 8	Dec. 6	30	28	Pos.	Dec. 13	7
A-55	Currier.....	Nov. 10	10	718	A. egypti	33	Sparks—A-27.....	1	Nov. 8	Dec. 6	30	28	Pos.	Dec. 11	5
A-57	Working...	Nov. 13	10	726	A. egypti	36	Eckenroad—A-46	1	Nov. 20	Dec. 10	25	20	Pos.	Dec. 14	4½
														1925	
A-60	St. Hill.....	Dec. 9	13	760	A. egypti	43	Dembowski—A-52	2	Dec. 2	Dec. 22	36	20	Pos.	Jan. 1	10
A-61	Calog.....	Dec. 8	8	757	A. egypti	15	Dembowski—A-52	1	Dec. 1	Dec. 28	14	28	Pos.	Jan. 4	7
A-62	Maloy.....	Dec. 8	8	757	A. egypti	14	Dembowski—A-52	1	Dec. 1	Dec. 28	12	28	Pos.	Jan. 3	6
A-65	Hughes....	Dec. 10	10	769	A. egypti	17	Riggs—A-50.....	3	Dec. 9	Dec. 29	13	30	Pos.	Jan. 5	7
										1925					
A-69	Wach.....	Dec. 19	14	769	A. egypti	16	Riggs—A-50.....	3	Dec. 9	Jan. 2	9	24	Pos.	Jan. 6	4½
A-71	Nelson.....	Dec. 19	14	778	A. egypti	20	Working—A-57...	3	Dec. 17	Jan. 2	16	16	Pos.	Jan. 8	6

ranged from eight to fifteen days or more. In most instances, potentially infected mosquitoes were not applied until twelve days or more after admission.

In one of the experimental cases, the initial symptoms of dengue appeared fifteen days after admission of the patient to the experimental ward and five days after having been bitten by infected mosquitoes. In all other experimental cases the patient had been in isolation for longer periods of time, in two cases, seventeen days, in two cases, eighteen days, in one case, nineteen days, and in the remaining fourteen cases, from twenty-three to thirty-nine days. The possibility of the acquirement of the infection prior to admission may therefore be dismissed.

In carrying out secondary biting experiments, a period of eight days or more was allowed to intervene between feedings. There were two exceptions to this general rule, and in both instances the possibility of infection by the first experiment could be quite definitely excluded.

To eliminate the possibility of criticism of bias on the part of members of the board in arriving at a diagtion of the disease before the discharge of the volunteer. For example, if experimental infection was attempted with a batch of infected *C. quinquefasciatus* with negative results, the volunteer was then subjected to the bites of a batch of female *A. egypti* that had been infected from the same patient used in infecting the *C. quinquefasciatus* in the initial experiment. Both lots of mosquitoes (*Culex* and *Aedes*) were given feedings of blood from the same dengue case on the same day. If the second experiment also proved to be negative, a third attempt was made to infect the volunteer with citrated blood (by subcutaneous injection) from an experimental or other patient with dengue in its early stages.

The adoption of this method of procedure gave us a check on our potentially infected mosquitoes and disclosed as well a few individuals who were immune to dengue.

The total number of volunteers subjected to biting experiments was forty-two, and of this number, experimental dengue occurred in twenty-five instances (60 per cent.).

This preliminary report will be limited to a discussion of the positive results obtained up to this time. The negative experiments, which were of great value to us, will be included in a final report to be published when the work has been completed. All the experimental cases were produced by two strains of the virus used in successive passages from man to mosquito, and there is but little question that the two strains were identical, as the second strain was transferred to mosquitoes from one of us (J. F. S.) during the first day of a rather severe attack of dengue. This infection was acquired accidentally, and there is but little doubt that it resulted from the bite of an infected *Aedes* mosquito in our laboratory.

The general policy was adopted of allowing eight days or more to elapse between biting experiments. As the incubation period of dengue in 84 per cent. of our twenty-five experimental cases ranged from four and one-half to seven days in susceptible individuals, and in no instance exceeded ten days, it was felt that an allowance of eight days for repetition of biting experiments, plus four and one-half days as the minimum incubation period in the human subject (total twelve and one-half days) would carry us well beyond the possibility of complications that might tend to render questionable the conclusions that might be drawn.

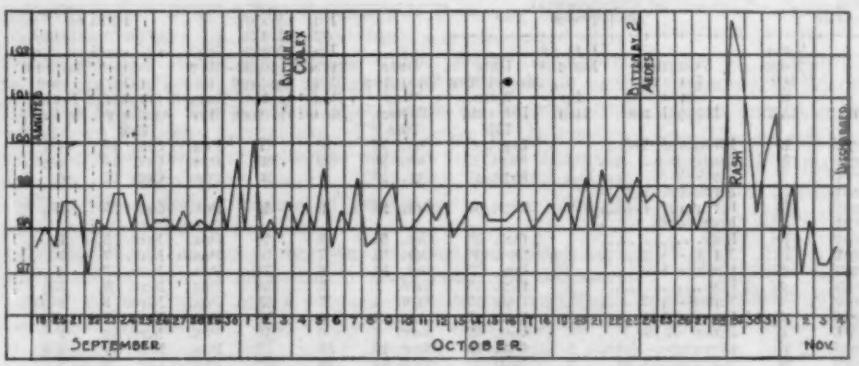

Chart 1.—Temperature and course in Case 1.

The system adopted in assigning numerical designations to the experimental cases was to number them serially, each figure being preceded by the letter A, B, C or I; A indicating an *Aedes* experimental case, B, blood inoculation, C, *Culex*, and I, immunity tests. Thus, A-26 indicates that *Aedes egypti* was used in the experiment.

The methods adopted and procedure followed having been explained, it is now possible for us to review briefly the results obtained.

CONFIRMATION OF THE RESULTS OBTAINED BY CLELAND AND BRADLEY RELATIVE TO THE TRANSMISSION OF DENGUE BY AEDES EGYPTI

The positive results obtained by Cleland and Bradley[3] in the transmission of dengue by *A. egypti* have been fully confirmed in this series of experiments (twenty-five positive cases).

The salient facts relative to these positive cases are summarized in Table 1.

Extended discussion of these cases would be out of place in this contribution, and will be reserved for the final report. We will content ourselves with a brief summary of the case histories of three cases. The symptomatology exhibited is representative of the group as a whole, and analogous to that observed in the case of natural infection seen in Manila and elsewhere throughout the world.

CASE 1 (Experiments C-9, A-20, I-5).—W. H. Alexander, a private in the Medical Department, Sternberg General Hospital, had been born and lived in Kansas, and had enlisted at Fort Logan, Colo., January, 1923. He had arrived in the Philippine Islands from San Francisco in June, 1923. There was no history of dengue nor of residence in a dengue affected district.

Sept. 19, 1924, he was admitted to the experimental ward and was kept under observation from September 20 to October 1. The pulse, temperature and respiration was recorded four times daily. The findings were normal except for slight elevations of temperature, September 29 and 30 and October 1, unaccompanied by any subjective symptoms.

October 2, Cage 558, containing eleven *C. quinquefasciatus* females, which had taken blood fifteen days previously from Patient B-1, was applied to the right leg at 9 p. m.

October 3, the cage was removed at 6 a. m. Seven mosquitoes remained alive. Three had taken blood. Four mosquitoes were reapplied at 9 p. m.

October 4, the case was removed at 6 a. m. All four mosquitoes were living. The three remaining mosquitoes were applied to the volunteer at 7 p. m. and removed at 11 p. m.

October 5, three mosquitoes of the same lot were again applied to the patient at 7 p. m., remaining until 5:30 a. m. One remained alive, one was dead, and one missing. One had taken blood.

From October 6 to 22, the patient remained well. A slight elevation of temperature, unaccompanied by other symptoms, occurred, October 21, lasting only a few hours.

October 23, Cages 551 and 552, each containing a single *Aedes* mosquito, one of which had fed thirty-six days previously on Patient B-1 and the other on Patient B-3, were applied to the patient at 9:15 a. m. and removed at 9:35. Both mosquitoes were filled with blood.

From October 24 to 27, the patient remained well.

At 9 p. m., October 28, he complained of chilliness and headache.

October 29, the patient's temperature at 8 a. m. was 101.0 F. The patient was removed to the regular dengue ward of the hospital. He complained at this time of headache, backache, vertigo, postorbital pain and a feeling of weakness. The headache was frontal, dull and throbbing, with a feeling of pressure. The face was livid; the eyes were suffused and brilliant. The tongue was coated. The body showed a fine erythematous rash, most marked over the trunk, arms and thighs. The facial expression was dull and stupid. The cervical, epitrochlear and inguinal glands were enlarged. The urine showed no albumin. The total leukocyte count was 6,800, of which 64 per cent. were neutrophils; 31 per cent., lymphocytes; 4 per cent., large mononuclears, and 1 per cent., eosinophils. He had not lost the sense of taste. There was constipation, but no nausea nor vomiting. The temperature reached 102.8 F. during the day.

Cage 694, containing fifty female *A. egypti* mosquitoes, was applied to the left leg at 1:50 p. m., and removed at 2:25 p. m. Forty-eight mosquitoes took blood. Cage 695, containing 100 female *C. quinquefasciatus* mosquitoes, was applied to the left leg at 8:30 p. m., and removed at 5:30 a. m. the following day. Sixty-seven of the culices were found to have taken blood.

October 30, the patient felt better. The temperature at 8 a. m. was 100 F. The patient had lost the sense of taste. There was no enlargement of the spleen or liver. The glands were enlarged. He still complained of vertigo. The rash was not so prominent and the face was not so livid as the day before; the eyes were unchanged. The maximum temperature during the day was 100 F. The total leukocytes

were 6,000; neutrophils, 60 per cent.; lymphocytes, 29 per cent.; large mononuclears, 9 per cent.; eosinophils, 1 per cent.; basophils, 1 per cent. The temperature fell to normal during the evening.

October 31, the temperature was 99.4 F. in the morning and 100.6 F. in the afternoon. Leukocytes: total, 6,400; neutrophils, 66 per cent.; lymphocytes, 27 per cent.; large mononuclears, 4 per cent.; eosinophils, 2 per cent.; basophils, 1 per cent. The patient felt better. The reflexes were hyperactive, including the abdominal, which was elicited for the

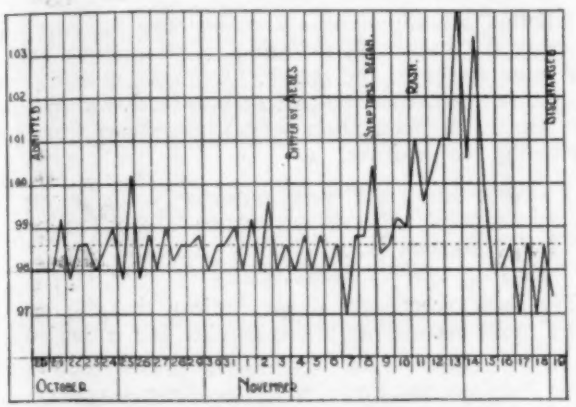

Chart 2.—Temperature and course in Case 2.

first time on this date. The appetite and sense of taste were recovered. The rash was fading.

From November 1 to 4 there was continued improvement and return to normal. The reflexes remained hyperactive. He returned to duty, Nov. 4, 1924.

December 8, 0.5 c.c. of citrated blood, which was drawn from Private Byan (A-48), then in the second day of an active attack of dengue, one hour and thirty minutes previously, was injected. The volunteer remained well and without elevation of temperature. Temperature observations were made twice daily for ten days.

This volunteer was repeatedly bitten by potentially infected *Culex* mosquitoes without the production of the disease; while, when bitten by two *Aedes* mosquitoes that had fed on the same infecting case, a definite attack supervened. The diagnosis was confirmed by the negative result of a blood injection forty-one days later.

CASE 2 (Experiments A-34, I-16).—J. F. Cain, a private in Company D, First Battalion, Fifteenth Infantry, Fort McKinley, P. I., aged 22, had been born in Maine and had enlisted at Fort Hamilton, N. Y., in May, 1924. He arrived in Manila, Aug. 26, 1924. There was no history of dengue nor of previous residence in a dengue infected district.

October 20, he was admitted to the experimental ward. Wassermann tests were negative twice. The urine and feces were negative. The total leukocytes were 8,200; neutrophils, 63 per cent.; lymphocytes, 25 per cent.; large mononuclears, 10 per cent., eosinophils, 1 per cent.

From October 21 to November 3, the patient was kept in the ward under observation. No significant variations in temperature or other symptoms were noted.

November 4, Cage 664, containing six female *A. egypti* mosquitoes, which had fed on Patient A-12, eighteen days previously, was applied at 9:24 a. m. and removed at 9:56.

From November 5 to 7, no changes were noted.

November 8, there was headache, ache in the legs, and loss of appetite. The temperature rose to 100.4 F. in the afternoon.

November 9, the patient said he felt better. No elevation of temperature was noted throughout the day.

November 10, he still had headache. The temperature was 99.2 F. at noon, 99 at 4 and at 8 p. m.

November 11, he stated that the appetite was returning and that he felt better, but the face was livid. The temperature was 101 F. at noon. He was transferred to the regular dengue ward of the hospital. His only complaints were slight vertigo, headache and weakness. There was a poor appetite and loss of the sense of taste. The face was flushed and livid, the eyes injected and suffused. The body showed a macular erythematous rash over the trunk, well marked on the abdomen. There was also a well defined mottling of the exterior surfaces of the arms, with pronounced "white island effect." The postcervical and epitrochlear glands were palpable and enlarged. All reflexes were present except the abdominal. Leukocytes totaled 6,000; neutrophils, 63 per cent.; lymphocytes, 30 per cent.; large mononuclears, 6 per cent.; eosinophils, 1 per cent.

November 12, the face was still flushed, but the eyes were not so injected. He felt better and had regained the sense of taste. The maximum temperature was 101 F.

November 13, there was a well defined maculopapular rash over the trunk and back to the hair line. The epitrochlears were well enlarged. The temperature rose to 104 F. in the afternoon. The leukocytes totaled 4,800; neutrophils, 59 per cent.; lymphocytes, 34 per cent.; large mononuclears, 6 per cent.; eosinophils, 1 per cent. This rise of temperature was followed by a well developed and pronounced erythematous macular rash of a rather dull pink, generalized over the body and extremities, well marked on face and scalp, and also noted on the buccal surfaces and hard palate. The so-called "white island effect" showed very well. Itching and stinging were noted on the hands and feet.

November 14, the temperature was 103.5 F. The leukocytes totaled 4,300; neutrophils, 59 per cent.; lymphocytes, 33 per cent.; large mononuclears, 7 per cent.; eosinophils, 1 per cent.

November 15, the temperature fell to normal during the day. The leukocytes numbered 5,200; neutrophils, 63 per cent.; lymphocytes, 27 per cent.; large mononuclears, 9 per cent.; eosinophils, 1 per cent.

November 16, the rash was fading, only persisting as a macular shining.

November 19, after progressive improvement, he was discharged to duty.

CASE 3 (Experiment A-48).—J. B. Byan, a private in the Headquarters Company, Air Service, Camp Nichols, P. I., aged 22, had been born in Illinois and enlisted at Fort Riley, Kan., and had gone from there to Fort McDowell, Calif., where he remained until October 1, when he sailed for Manila. There was no history of dengue nor of residence in a dengue infected locality.

November 13, he was admitted to the experimental ward six days after arrival in Manila.

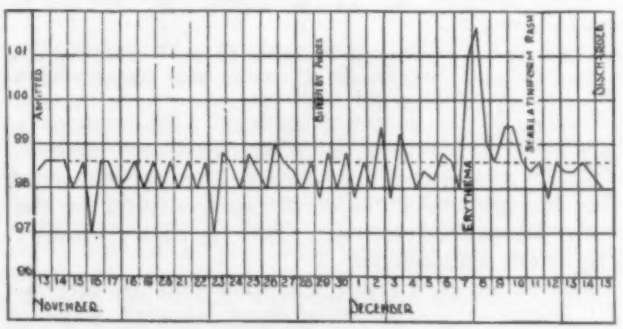

Chart 3.—Temperature and course in Case 3.

From November 13 to 28, he was kept under observation. No significant temperature rises were noted. The Wassermann reaction was negative in three tests. The urine was negative.

November 17, the leukocytes numbered 8,800; neutrophils, 67 per cent.; lymphocytes, 25 per cent.; large mononuclears, 8 per cent.

November 26, the leukocytes numbered 8,200; neutrophils, 65 per cent.; lymphocytes, 29 per cent.; large mononuclears, 5 per cent.; basophils, 1 per cent.

November 29, Cage 724, containing twenty-four female *A. egypti* mosquitoes, which had fed on Patient A-40 twelve

days previously, was applied at 8:46 a. m., and removed at 9:14.

From November 30 to December 6, the patient remained well.

December 7, he had headache and chilly sensations in the evening. The temperature was 101 F.

December 8, the patient was chilly, complained of aches, and had no appetite. The temperature was 101.6 F. He was transferred to the regular dengue ward of the hospital. Blood was drawn from the patient at 9:30 a. m. for use in immunity experiments. The leukocytes numbered 6,150; neutrophils, 60 per cent.; lymphocytes, 34 per cent.; large mononuclears, 6 per cent. He complained of headache, general aching, pain in the back, weakness and loss of appetite and taste. The face had a peculiar livid tint, the eyes were suffused and injected, the expression, dull. The upper part of the body was erythematous and dermographic. The throat was congested. The posterior cervical, inguinal and epitrochlear glands were palpable. All reflexes were present and exaggerated. The temperature fell to 99 F. in the evening.

From December 9 to 15, with the exception of temperatures of 99.4 F. on the afternoon of December 9 and the morning of December 10, no further fever was observed. The patient made rapid improvement; weakness disappeared after forty-eight hours, with return of appetite and taste. December 11, he manifested a pronounced scarlatiniform rash, generalized, but most evident over the trunk. Lividity of the face and the bleary expression were last noted that day. Itching of the hands and feet had been prominent. He returned to duty, December 15.

December 9, the leukocytes numbered 6,500; neutrophils, 63 per cent.; lymphocytes, 29 per cent.; large mononuclears, 7 per cent.; basophils, 1 per cent.

December 10, the leukocytes numbered 5,250; neutrophils, 58 per cent.; lymphocytes, 33 per cent.; large mononuclears, 9 per cent.

In this instance the disease was produced by the bites of mosquitoes that had fed twelve days previously on a patient with dengue.

Examination of Table 1 will show that the preliminary period of isolation or time interval elapsing between biting experiments was between eight and seventeen days, except in two instances. In these two instances, the interval was shortened for special reasons, and the final positive results obtained were in no wise affected thereby. The details will be incorporated in the final complete report.

TIME INTERVALS AFTER APPEARANCE OF THE INITIAL SYMPTOMS, DURING WHICH DENGUE PATIENT CONTINUES TO BE INFECTIVE TO AEDES MOSQUITOES

So far, we have been able to transmit the disease with mosquitoes that took feedings of blood from persons with dengue fever on the first, second and third days of the disease. Examination of Table 1 shows the following cases:

Experimental Subject A-60 (St. Hill) was infected by mosquitoes that had taken blood from an experimental case of dengue during the second day of the disease.

Experimental Subjects A-65 (Hughes), A-69 (Wach) and A-71 (Nelson) were infected by *Aedes* mosquitoes that had taken blood from dengue patients on the third day of the disease.

Further investigations are under way to determine whether the patient is infective to mosquitoes during still later stages of the attack. Evidence is also being sought as to whether the patient is infective to mosquitoes during the incubation period immediately prior to the rise in temperature.

LENGTH OF TIME THE DENGUE VIRUS MUST REMAIN IN THE INFECTED MOSQUITO BEFORE TANSMISSION BECOMES POSSIBLE

The facts ascertained, so far, indicate that the dengue virus must remain in the mosquito for a period of approximately eleven days before transmission becomes possible to nonimmune human beings. We base this conclusion on the experimental evidence presented in Table 2.

TABLE 2.—*Positively Controlled Experiments Indicating That the Developmental Period of Dengue Fever Virus in the Mosquito Exceeds Ten Days*

Data on Experimental Subject				Data on Mosquitoes Used in Experiment			Data on Infection of Experimental Mosquitoes			Data on Biting of Volunteers by Infected Mosquitoes			Results	
													Data on Positive Cases	
Experimental Case No.	Volunteer	Date Admitted to Experimental Ward 1924	Number Days in Isolation or Since Bitten by Mosquitoes	Serial Number of Lot	Kind	Total Number in Lot	Volunteer Used to Infect Mosquitoes	Day of Dengue in Patient	Date Mosquitoes Were Infected 1924	Date Volunteer Was Bitten 1924	No. of Females That Took Blood	No. of Days Virus Had Remained in Mosquitoes	Positive or Negative	Date Initial Symptoms Appeared 1924	Incubation Period in Days
A-42	Dembowski	Oct. 20	9	714	A. egypti	34	Carter—A-26.....	1	Nov. 6	Nov. 13	31	7	Neg.	.....	...
A-47	Dembowski	Oct. 20	4	714	A. egypti	20	Carter—A-26.....	1	Nov. 6	Nov. 17	24	11	Neg.	.....	...
A-52	Dembowski	Oct. 20	7	714	A. egypti	24	Carter—A-26.....	1	Nov. 6	Nov. 24	18	18	Pos.	Dec. 1	7
A-41	Eckenroad.	Oct. 20	6	694	A. egypti	41	Alexander—A-20.	1	Oct. 29	Nov. 7	30	9	Neg.	.....	...
A-46	Eckenroad.	Oct. 20	8	694	A. egypti	27	Alexander—A-20.	1	Oct. 29	Nov. 15	25	17	Pos.	Nov. 19	4½
A-51	Working...	Nov. 13	17	726	A. egypti	36	Eckenroad—A-46	1	Nov. 20	Nov. 30	28	10	Neg.	.....	...
A-57	Working...	Nov. 13	10	726	A. egypti	26	Eckenroad—A-46	1	Nov. 20	Dec. 10	25	20	Pos.	Dec. 14	4½

For one reason or another, however, we are able to present only three sets of experiments in which the same lot of infected mosquitoes was first used on a volunteer less than eleven days after infection of the lot, with negative results, and in which repetition of the experiment at a later date gave positive results.

In the case of Dembowski (A-42, A-47, A-52), the first of the cases appearing in Table 2, Lot 714, *A. egypti*, failed to produce dengue seven days after having been infected, but when reapplied to the same volunteer for the third time, eighteen days subsequent to infection, they produced a typical attack of dengue.

Lot 694, *A. egypti*, failed to produce dengue in Eckenroad (A-41) nine days after having been infected, but when reapplied to the same volunteer seventeen days after infection, they gave rise to a typical attack of dengue.

When Volunteer Working (A-51) was first bitten by Lot 726, *A. egypti*, ten days after their infection, no dengue resulted, but when he was again bitten by the

In a considerable number of experiments we failed to produce dengue with "lots" of potentially infected mosquitoes that were allowed to take blood from experimental subjects less than eleven days after their infection.

same lot of mosquitoes twenty days after infection, a typical attack of dengue occurred.

Other positive evidence, suggesting that the developmental period of the virus in the mosquito is approximately eleven days, will be found in Table 1. In Experimental Case A-50 (Riggs) the incubation period in the mosquito was eleven days; and in Experimental Case A-48 (Byan) it was twelve days.

TABLE 3.—*Duration of Infectivity of A. Egypti Mosquitoes*

1 lot	of A. egypti caused dengue 11 days after their infection
1 lot	of A. egypti caused dengue 12 days after their infection
3 lots	of A. egypti caused dengue 14 days after their infection
2 lots	of A. egypti caused dengue 16 days after their infection
1 lot	of A. egypti caused dengue 17 days after their infection
4 lots	of A. egypti caused dengue 18 days after their infection
3 lots	of A. egypti caused dengue 20 days after their infection
1 lot	of A. egypti caused dengue 24 days after their infection
2 lots	of A. egypti caused dengue 25 days after their infection
4 lots	of A. egypti caused dengue 28 days after their infection
1 lot	of A. egypti caused dengue 29 days after their infection
1 lot	of A. egypti caused dengue 31 days after their infection
1 lot	of A. egypti caused dengue 36 days after their infection

INCRIMINATION OR ELIMINATION OF C. QUINQUEFASCIATUS AS A TRANSMITTING AGENT

It is our opinion that *C. quinquefasciatus* (*fatigans*) can definitely be eliminated as a transmitter of dengue fever, and this opinion is based on the experimental evidence submitted in Table 4.

Analysis of this table shows the following facts:

Private Yarch was bitten by fourteen potentially infected *C. quinquefasciatus* mosquitoes that had taken blood from a typical case of dengue during the first day of the disease. The virus had been allowed to remain in these mosquitoes for a period of twelve days. A period of thirteen days was then allowed to intervene and no dengue resulted.

Private Yarch was then bitten by ten *A. egypti* mosquitoes that had been infected coincidentally with the *Culex* mosquito used in the original experiment, from the same patient and on the same day. The experiment with *Aedes* mosquitoes produced a typical attack of dengue with an incubation period of four and one-half days.

Private Crone was bitten by seven potentially infected *C. quinquefasciatus* mosquitoes that had taken blood from a patient with a typical attack of dengue during the first day of the disease. The virus had remained in these mosquitoes for a period of twenty-five days. A period of thirteen days was then allowed to intervene and no dengue resulted.

Private Crone was then bitten by twenty *A. egypti* mosquitoes that had been infected coincidentally with the *Culex* mosquito used in the preceding experiment, from the same patient and during the same day. The bites of *Aedes* mosquitoes produced a typical attack of dengue four and one-half days later.

Private Squires was bitten by sixteen potentially infected *C. quinquefasciatus* mosquitoes that had taken blood from a dengue patient during the first day of the disease. The virus had remained in these mosquitoes for a period of twenty-two days. The subject of the experiment was closely observed for a further period of ten days and remained free of any symptom of dengue fever.

Private Squires was then bitten by thirteen *A. egypti* mosquitoes that had been infected coincidentally with the *Culex* mosquito used in the preceding experiment, from the same patient and on the same day. A typical attack of dengue fever resulted five days after the *Aedes* biting experiment.

Private White was bitten by twelve potentially infected *C. quinquefasciatus* mosquitoes that had been allowed to feed on a patient with a typical attack of dengue during the first day of the disease. The virus remained in this lot of mos-

TABLE 4.—*Experimental Evidence Demonstrating That Culex Quinquefasciatus (Fatigans) Is Not a Transmitter of Dengue Fever*

Data on Experimental Subject				Data on Mosquitoes Used in Experiment			Data on Infection of Experimental Mosquitoes			Data on Biting of Volunteers by Infected Mosquitoes			Results		
														Data on Positive Cases	
Experimental Case No.	Volunteer	Date Admitted to Experimental Ward 1924	Number Days in Isolation or Since Bitten by Mosquitoes	Serial Number of Lot	Kind	Total Number in Lot	Volunteer Used to Infect Mosquitoes	Day of Dengue in Patient	Date Mosquitoes Were Infected 1924	Date Volunteer Was Bitten 1924	No. of Females That Took Blood	No. of Days Virus Had Remained in Mosquitoes	Positive or Negative	Date Initial Symptoms Appeared 1924	Incubation Period in Days
C-6	Yarch.....	Sept. 12	17	557	C. quinquefasciatus	5	Richards—B-3....	1	Sept. 17	Sept. 29	..	..			
				559	C. quinquefasciatus	10	Prock—B-2.....	1	Sept. 17	Sept. 29	14	12	Neg.	.....	...
A-12	Yarch.....	Sept. 12	13	551	A. egypti	10	Richards—B-3....	1	Sept. 17	Oct. 12	10	25	Pos.	Oct. 16	4½
C-7	Crone.....	Sept. 12	17	558	C. quinquefasciatus	13	Reed—B-1.....	1	Sept. 17	Sept. 29	7	12	Neg.	.....	...
A-13	Crone.....	Sept. 12	13	552	A. egypti	20	Reed—B-1.....	1	Sept. 17	Oct. 12	20	25	Pos.	Oct. 16	4½
C-10	Squires.....	Nov. 11	9½	695	C. quinquefasciatus	56	Alexander—A-20.	1	Oct. 29	Nov. 20	16	22	Neg.	.....	...
A-53	Squires.....	Nov. 11	10	694	A. egypti	15	Alexander—A-20.	1	Oct. 29	Nov. 30	13	31	Pos.	Dec. 5	5
C-11	White.....	Nov. 11	15	719	C. quinquefasciatus	46	Kibbe—A-28.....	1	Nov. 8	Nov. 26	12	18	Neg.	.....	...
A-54	White.....	Nov. 11	10	717	A. egypti	31	Kibbe—A-28.....	1	Nov. 8	Dec. 6	30	28	Pos.	Dec. 13	7
C-12	Currier.....	Nov. 10	16	720	C. quinquefasciatus	43	Sparks—A-27.....	1	Nov. 8	Nov. 26	18	18	Neg.	.....	...
A-55	Currier.....	Nov. 11	10	718	A. egypti	33	Sparks—A-27.....	1	Nov. 8	Dec. 6	30	28	Pos.	Dec. 11	5

LENGTH OF TIME INFECTED MOSQUITOES ARE CAPABLE OF TRANSMITTING DENGUE FEVER

An analysis of the data incorporated in Table 1 suggests very definitely that *A. egypti* mosquitoes infected with dengue fever virus continue to be infective throughout their life. This statement of opinion is based on the facts in Table 3.

So far, two additional attempts have been made to transmit dengue through the medium of mosquitoes infected for long periods of time, in one case forty-five days and in the other fifty days. Both experiments yielded negative results. Control experiments on both volunteers, in one instance with citrated blood from a patient with dengue and in the other with *Aedes* mosquitoes known to have produced typical attacks of dengue, also were negative. The conclusion is warranted therefore that these two negative experiments were valueless as the experimental subjects were immune.[7]

7. Subsequent to the preparation of this report, we have succeeded in producing dengue fever in two nonimmunes with a lot of A. egypti mosquitoes that had been infected sixty-two and sixty-six days previously. The statement, therefore, is justified that the infected female, once she becomes capable of transmitting the virus of dengue, retains that capacity for a very long period of time and probably throughout the remainder of her life.

quitoes for eighteen days before their further use. The volunteer was then closely observed for a period of ten days and did not have dengue fever.

He was then bitten by thirty *A. egypti* mosquitoes that had been infected coincidentally with the *Culex* mosquito used in the preceding experiment, from the same patient and during the same day. A typical attack of dengue occurred seven days later.

Private Currier was bitten by thirteen potentially infected *C. quinquefasciatus* mosquitoes that had taken blood eighteen days previously from a patient with dengue fever during the first day of the disease. He was then closely observed for a period of ten days, and showed no symptoms of dengue.

He was then bitten by thirty *A. egypti* mosquitoes that had been infected coincidentally with the *Culex* mosquito used in the preceding experiment, from the same patient and during the same day. A clear-cut attack of dengue resulted in five days.

INCUBATION PERIOD OF DENGUE IN THE HUMAN SUBJECT

As all volunteers used in this series of experiments were held in a special mosquito-proof ward for considerable periods of time before being used for experimental purposes, as well as throughout the duration of the experiment, it was possible to treat them as "patients in hospital." Temperature, pulse and respiration were recorded four times daily (8 a. m., 12 m., 4 p. m. and 8 p. m.).

TABLE 5.—*Incubation Period in Twenty-Five Experimental Cases*

Number of Days	Number of Cases	Per Cent. of Total Cases
4½	1	4
4½	6	24
5	3	12
5½	2	8
6	4	16
7	6	24
8	1	4
9	1	4
10	1	4

Definite elevation in temperature was used as the criterion for determining the date of onset of initial symptoms of dengue.

The incubation period in this series of twenty-five experimental cases is given in Table 5.

From the practical point of view, the incubation period of dengue fever may be considered as ranging from four and one-half to seven days, as in 84 per cent. of this series of twenty-five cases it varied within these limits.

In the one case (A-40) showing an incubation of nine days, definite subjective symptoms of dengue were noted by the volunteer two days prior to elevation of temperature.

Experimental Subject A-60, showing an incubation period of ten days, was bitten by mosquitoes that had been infected on the second day of the disease, and it was possible either that the virus was attenuated, that only a small amount found its way into the volunteer's body, or that the subject was somewhat refractory to the virus.

NUMBER OF MOSQUITOES USED IN THE INDIVIDUAL EXPERIMENTS

In the early stages of the experiments, only ten or fifteen female mosquitoes were included in each "lot" in attempting to infect them for use in subsequent biting experiments.

We very soon learned, however, that the wiser plan was to increase materially the numbers, and for most of the experiments the number used for initial biting (to infect) ranged from twenty-five to forty.

In the case of *C. quinquefasciatus*, the biting habits were so erratic and the mortality rate so high that the number used for initial biting usually was from fifty to 100. During the period intervening between initial infection of a given "lot" of mosquitoes and their subsequent use for experimental purposes (from ten to twenty days), the death rate approximated 30 per cent.

If Columns 7 and 12 of Tables 1 and 4 are compared, the one with the other, it will be evident that when a given number of potentially infected mosquitoes were applied to an experimental subject, a very large proportion of them took blood.

The smallest number of infected mosquitoes used with positive results was the "lot" of two female *A. egypti* mosquitoes used in infecting Experimental Subject A-20. Both of these females fed on the subject of the experiment, and the initial symptoms of dengue appeared five and one-half days thereafter.

IMMUNITY TO DENGUE

It is not a very uncommon experience in regions where the disease is endemic to meet persons who have had two, or even more, attacks of dengue. In those recently arrived in areas of dengue endemicity, the interval between the attacks may have been no longer than a few weeks. Two suggestions have been offered to explain such apparent lack of acquired resistance. The first is that, while its epidemiologic features suggest a temporary period of acquired resistance following recovery, one attack of dengue confers no certain, solid or lasting immunity, such as follows an attack of yellow fever, for instance; the other is that the various clinical syndromes which are commonly diagnosed dengue represent, in reality, similar but etiologically different infections. In the latter case, immunity to one could not be expected to result from an attack of another of these infections. Against this hypothesis, although not by any means disposing of it, is the fact that in our work the main clinical types have been observed in different volunteers infected with the same virus.

To obtain exact information concerning the development of immunity during an attack of dengue, twelve persons have been injected with blood from patients suffering with the disease in its first or second day.

These twelve persons had recovered from previous definitely diagnosed attacks at dates that are known. The periods intervening between the initial symptoms of the previous attack and the injection of the virus-blood were from forty-one to one hundred and twenty-one days. The volunteers were injected subcutaneously, each receiving 0.5 c.c. of the blood of the donor. All donors had given three negative blood Wassermann tests—the specimens for examination being taken at intervals of two or more days.

Of the twelve volunteers whose immunity was thus tested, five came down with the dengue—four after the usual periods of incubation, one after eleven days. In these five positive cases, the periods elapsed since the first attack were fifty-three, fifty-five, eighty-three, ninety-eight and one hundred and twenty-one days, while among the seven who did not develop dengue, the intervals were forty-one, fifty-one, fifty-three, fifty-three, seventy-four, seventy-seven and ninety days.

This work is being continued, but the results of these few tests, which are summarized in Table 6, indicate that an attack of dengue confers a definitely increased resistance to the infection.

Of these twelve volunteers, 58 per cent. were found to be immune, in that they exhibited no symptom of dengue as a result of the test injection, whereas among those who did develop the disease, the duration of the febrile period was shorter than in the original attack. In the primary infection, the fever lasted for an average of 4.8 days, while in the immunity-test attack the temperature elevation continued for an average of only 2.8 days. A further argument in this same direction is afforded by the relatively low incidence of the disease among native troops. On the other hand, the appearance of the disease in 42 per cent. of these volunteers, together with the observation of second and even third attacks among persons other than natives in Manila, indicates that the immunity is temporary and can be compared neither in its duration nor in its solidity with that which follows an attack of yellow fever.

TABLE 6.—*Immunity Experiments*

Volunteer		Virus-Blood of Patient			Result		Duration of Disease in Volunteer	
Serial Number	Period Since Initial Symptoms Last Attack, Days	Experiment Number of Donor	Day of Dengue in Donor	Amount Injected into Volunteer, C.c.	Positive or Negative	Period of Incubation in Immunity Test Attack, Days	First Attack, Days	Second Attack, Days
1-1	53	A-28	2d	0.5	+	3½	4	2
1-2	53	A-28	2d	0.5	—	...	4	...
1-3	53	A-28	2d	0.5	—	...	5	...
1-4	98	A-28	2d	0.5	+	5	4	3
1-5	41	A-48	1st	0.5	—	...	3	...
1-6	55	A-48	1st	0.5	+	5	5	3
1-7	77	A-48	1st	0.5	—	...	3	...
1-8	74	A-48	1st	0.5	—	...	7	...
1-9	121	A-48	1st	0.5	+	11	5	2
1-10	51	A-54	2d	0.5	—	...	6	...
1-11	90	A-54	2d	0.5	—	...	8	...
1-12	86	A-54	2d	0.5	+	7	6	4

SUMMARY AND CONCLUSIONS

The Medical Department Research Board, U. S. Army, during 1924, undertook the investigation of a number of the unsolved problems relating to the transmission of dengue fever. This work was done in laboratories assigned the Board at the Bureau of Science and in an experimental ward at the Sternberg General Hospital, U. S. Army, Manila, P. I.

All mosquitoes used in the experiments were bred from eggs. The number of mosquitoes used in each experiment was known, and exact counts were made of those that took a feeding of blood during the course of each experiment.

The experimental work was done in a carefully screened ward and extraordinary precautions were taken to prevent the entrance of mosquitoes. Entrance to the experimental ward was through four doors with intervening vestibules.

Volunteers were secured from military personnel (American troops), and no volunteer was allowed to leave the experimental ward from the date of his admission to the date of discharge or transfer to the regular dengue fever ward of the hospital.

All volunteers were held under observation for a sufficient period of time to exclude the possibility of the acquirement of dengue prior to admission or as the result of previous biting experiments.

The results obtained were as follows:

Forty-two American soldiers were subjected to eighty-three biting experiments, and dengue fever was transmitted experimentally by mosquitoes in twenty-five instances.

1. *Confirmation of Previously Reported Transmission of Dengue by the Aedes Egypti Mosquito.*—Dengue fever was produced experimentally by the bites of infected *A. egypti* mosquitoes in twenty-five of forty-two volunteers (60 per cent.).

2. *Period of Infectivity in the Dengue Fever Patient.*—The experimental evidence obtained justifies the conclusion that a patient with dengue fever is capable of infecting *A. egypti* mosquitoes at least during the first three days of the disease.

3. *Developmental Period of Dengue Virus in the Mosquito.*—All biting experiments done with mosquitoes in which the dengue virus had been allowed to remain for from two to ten days inclusive yielded negative results. Various lots of mosquitoes in which the virus had remained for from eleven to sixty-six days, when applied to volunteers, produced typical attacks of dengue. The experimental evidence presented indicates that the virus causing dengue fever must remain in the mosquitoes for a period of approximately eleven days before they become capable of transmitting the disease to nonimmune human beings.

4. *Period of Infectivity of the Infected Mosquito.*—Fifteen cases of experimental dengue resulted from the bites of various lots of mosquitoes in which the virus had remained for periods ranging from twenty to sixty-six days after infection of the mosquitoes. The experimental evidence reported demonstrates very definitely that *A. egypti* mosquitoes infected with dengue fever virus continue to be infective for very long periods of time and probably throughout the remainder of their lives.

5. *Elimination of Culex Quinquefasciatus as a Transmitter of Dengue.*—Five volunteers were subjected to the bites of lots of varying numbers of potentially infected *C. quinquefasciatus* mosquitoes in which the dengue virus had been allowed to remain a sufficient length of time to produce infection. A sufficient period of time was then allowed to elapse to more than cover any possible incubation period in the human subject. The results were entirely negative.

The same five volunteers were then rebitten by five lots of *A. egypti* mosquitoes that had been infected coincidentally with the *Culex* mosquitoes used in the original experiments, from the same patients and on the same day. After being bitten by infected *A. egypti* mosquitoes, each of the five volunteers came down with a typical attack of dengue with incubation periods ranging from four and one half to seven days.

The conclusion is warranted that *C. quinquefasciatus* is not a transmitter of dengue fever.

6. *Immunity to Dengue.*—Twelve persons who had recovered from an attack of dengue which began between forty-one and 121 days previously were reinfected through the injection into them of blood from patients in the early stages of the disease. It was found that 58 per cent. of these persons were immune. Those who did develop the typical disease were sick a shorter number of days than they were at the time of their primary attack: 2.8 days, as compared with 4.8 days. These results, together with the relatively low incidence of the disease among native troops, indicate that dengue is followed by a definite degree of immunity, but the refractory state does not compare in its permanence of solidity with that of yellow fever.

DENGUE AND YELLOW FEVER

The striking similarity between the mechanism by which both dengue and yellow fever are transmitted suggests the possibility that the organisms causing the two diseases may fall into the same group.

Clinically, it is possible to find some resemblance between the two diseases, considering only those cases of yellow fever which happen to be of the same degree of severity as a typical attack of dengue. Dengue never results in death—its attacks are always mild. It is true that in the one case—dengue fever—we are dealing with an acute exanthematous disease while in the other—yellow fever—such is not the case. The almost invariable albuminuria in the latter, of rare occurrence in dengue, is probably related to the relatively greater degree of intoxication which characterizes the yellow fever attack. The durability of the immunity which develops in the course of recovery from yellow fever is one of the most striking differences between these two diseases but this factor also may depend, in part, at least, on the degree to which the immunizing function of the tissues is stimulated.

However similar or different the etiologic agents or the clinical features of the two infections may be, in their fundamental epidemiologic characteristics, the diseases are identical. Both are caused by filtrable viruses that are present in the peripheral blood of the patient, and both may be produced by the injection into a susceptible individual of virus blood, or a filtrate of it. Both are transmitted, naturally, solely by the bites of the *Aedes egypti (Stegomyia fasciata)* mosquito, and the mechanism of transmission is practically identical in the two: the patient is infective to the mosquito during the first three days of the disease, the mosquito itself becomes infective only after the virus has remained in its body for approximately eleven days, and the mosquito continues to be infective thereafter for a very long time—probably throughout the remainder of its life.

These common epidemiologic factors suggest the desirability of concentrating research work on dengue fever in the hope that the solution of its problems may suggest other methods of approach to the, as yet, unsolved problems relating to the epidemiology and control of yellow fever.

GOITER IN THE INTERMOUNTAIN REGION OF UTAH

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The larger phase of the goiter problem, and the one that may prove to be most significant in the future, has not yet been touched on. It is the relative iodin deficiency in the various geological strata that form the catchment basins and water sheds of the streams. If this were determined in any given section, one could at a glance estimate the probable goiter incidence and the extent of prophylactic measures necessary to meet the situation. Since iodin is a volatile substance, we would naturally expect that the igneous rocks and the springs of water that come from them would be absolutely iodin free. Theoretically, all volcanic or granitic sections of country should have a relatively large percentage of goiter incidence. Whether this is the case or not remains to be proved, but in the data available in this intermountain region there is at least a marked indication in that direction.

Thus, in the town of St. George, in southern Utah, with a population of more than 3,000, goiter was quite unusual for more than half a century, from the time of its founding until a water system was installed and the water from Pine Valley Mountains brought in. Pine Valley Mountains are almost entirely igneous, and the volatile iodin no doubt escaped at the time of their extrusion. Since the advent of the new water supply, many people have developed goiter, and what was for a long time a comparatively immune district has now been added to the large endemic section of southern Utah.

In the Virgin Valley, which is a part of this section, although no careful survey has yet been made, I am quite sure that fully 75 per cent. of the adult women have goiter. It is here, in these isolated mountain gorges, that one encounters enormous thyroid growths, which are allowed to progress unchallenged until they assume maximal dimensions. Quite recently, in this section, a quack reaped a bountiful harvest from the sale of an iodin mixture for the cure of goiter, and closely following his coming three lives were charged to the account of toxic adenoma.

It seems to be well established by the state wide survey now in progress that towns which enjoyed considerable immunity from goiter while they used well water and water from the surface springs are taking on a marked increase of goiter incidence since they installed water systems, and are getting their water supply from mountain springs up near the melting snows.

Although this sparsely settled intermountain country does not furnish materials for large goiter clinics, we have our due proportion, and my experience shows that the same principles as to causation, variety, percentage, age of toxicity and results of treatment obtain with us as with other people.

I am thoroughly convinced from my experience that goiter surgery can, with proper care, be made as safe as any other major surgery, and that there is no longer justification for treating patients with the so-called medical plan when an operation is urgently indicated.

During the last three years I have treated 333 cases of the various forms of goiter, not including hypothyroidism or the inflammatory conditions. One hundred and fifty-six thyroidectomies were performed with two fatalities, a mortality of 1.3 per cent. Seventy-three per cent. of these patients were toxic, and many of them extremely toxic. One of these fatalities was due to tracheal obstruction, and one patient was so toxic that she showed no improvement after months of rest and medical treatment, and thyroidectomy was undertaken as a last resort.

Three of these patients were so toxic that I dared not operate on them. Two of them died after operation at the hands of other surgeons. The other died in the hospital without operation, after developing marked gastro-intestinal symptoms with jaundice and cardiac failure. Of these 156 operative cases we have been able to trace 104. In the majority, the results were striking. Nothing more dramatic has occurred in our experience than the physical and mental change that comes to a hyperthyroid patient in the few weeks following a successful thyroidectomy.

I believe that rest in bed with abundance of fluids, and the use of compound solution of iodin in the hyperplastic cases, are the most important preparatory measures. Except in cases with broken compensation, preoperative digitalization has been of little value. Calcium carbonate is given to prevent tetany. I believe that in all hazardous cases there should be frequent observations of blood pressure and pulse rate by a competent observer, throughout the operation. I am sure that I have in this way been able to stop in time several

operations in which life was threatened by shock and hemorrhage. Gauze packing was used, and the operation was resumed the next day. I have almost discarded preliminary ligations. Postoperative hemorrhage has not been frequent, but where its possibility has been suspected, I have had the cases typed for transfusion prior to operation.

The condition described as hypoglycemia has been encountered five or six times in my series. Urinalysis showed much acetone and diacetic acid. The relief from intravenous glucose was striking.

I am convinced that safety in goiter surgery depends on a few fundamental things: (1) careful selection and preoperative preparation of the patient; (2) thorough comprehension of the anatomy, and (3) good team work on the part of the operating force.

CEREAL GRUEL FEEDING

TWO YEARS' EXPERIENCE WITH DIFFICULT CASES

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For the last few years, there has been a gradual improvement toward more simplified infant feeding, when it has been necessary to use other than mother's milk. We feel that in this respect we have reached a fair measure of success, and that the present methods are easily grasped by the mothers, thereby giving us better cooperation because of less arduous preparation. In this attempt, however, we have not always considered the economic phase with sufficient care in our desire to get a proper food. It must be understood that each infant who has to be fed in part or in whole on artificial foods is a distinct entity, and must be fed and managed entirely according to its individual needs. Therefore, there is no one food which we can call a panacea for all difficult feeding cases.

CARBOHYDRATE VALUES

The advantage of carbohydrate in infant foods has long been recognized, but in the form of starch intake it has been more recently revived. Carbohydrates yield the most important oxidizing material with the least expenditure of effort on the part of the growing child. They are economical because of their complete utilization and because the energy required for digestion is much lower than for fat and protein.

Carbohydrates are nitrogen retentive and aid in the digestion and assimilation of fats and protein. They have a water retentive value, especially noticeable in those cases of marked malnutrition in which there is a dehydration as well as a loss of salts. This is made manifest by the smaller amount of urine excreted during cereal gruel feedings than when no cereal is used, although the fluid intake is the same.

REVIEW OF THE LITERATURE

In the literature on the thicker-than-fluid feedings in the last few years, we find all the authorities pretty well agreed on the adaptability of this food to the majority of difficult feeding cases.

Chapin,[1] in his series showing all the evidences of overfeeding in all the food elements, obtained excellent results with cereal feedings. In those cases in which assimilation was presumably good, showing complete digestion but no gain in weight, Mixsell[2] states that under cereal feedings or cereal additions, the improvement in color, turgor and weight was very gratifying.

Those who have watched babies fed on cereal gruel or thick cereal foods over a period of a month or longer cannot but agree with Porter and Gelston[3] when they say that one is struck with the vigor and sturdiness, splendid turgor, well developed muscles, pinkish glow to the skin, and rapid gain in weight. The gain in weight is the nearest like that of a properly fed breast baby of all modifications of cow's milk, unless it be that of lactic acid milk as described by Marriott and Davidson[4] or Field.[5]

O. H. Wilson[6] says:

> We have, however, learned that sugar digestion is not an independent function, but influences and is influenced by the digestion of fat and protein.

But his following statement is significant with our present knowledge of the early feeding of solids:

> The fact that starch digestive agents are found in the secreting glands, even in the fetus, is interesting as a medical curiosity. The discovery has done little good in infant feeding; in fact, according to the opinion of some, it had best remain unknown, as it may lead to the premature feeding of solids.

Bearing on this point, Lowenberg[7] reports 128 patients fed on solids; of this number seventy-six, or more than half, received solid food between 6 and 8 months of age, and 25 per cent. received solid food at 6 months. He states that the addition of these substances to the diet in early infancy is not only harmless but decidedly advantageous.

In the thick feedings as used by the various authors, rice is spoken of by Mixsell[2] as having the advantage of being more soluble and having better colloids than farina.

Levinson[8] used a 5 per cent. oatmeal gruel and found that this, added to albumin milk or cow's milk increases the appetite of the infant and can be given to infants of any age, and that they benefit by the taking. On the other hand, Mellanby[9] asserts that "cereals, and especially oatmeal, tend to the production of badly formed teeth," to which we cannot wholly agree.

Most authors use farina in their cereal mixtures, because it is so easily prepared and economical and is not irritating to the intestinal tract. The Germans used a butter-flour dietary following the World War, which for a time had a wide use there. But Heller[10] does not advise its use outside the clinic, especially in the hot weather, because of the high fat and sugar content. Ernberg[11] states that there was less meteorism with the butter-flour dietary than with other forms of artificial food. Gismondi[12] was impressed with the increased tolerance for fat with the butter-flour dietary.

1. Chapin, H. D.: Thick Cereal Mixtures in Difficult Feeding Cases, M. Rec. **100**: 539 (Sept. 24) 1921.

2. Mixsell, H. R.: Thick Cereal Feedings in Twelve Cases of Malnutrition in Infancy, Arch. Pediat. **36**: 449 (Aug.) 1919.

3. Porter, Langley; and Gelston, C. F.: Thick Feedings in Infancy, M. Clin. N. Am. **6**: 1409 (May) 1923.

4. Marriott, W. M., and Davidson, L. T.: Acidified Whole Milk as a Routine Infant Food, J. A. M. A. **81**: 2007 (Dec. 15) 1923.

5. Field, M. C.: A Clinical Study of Lactic Acid Milk as a Routine Feeding for Sick and Healthy Infants, Arch. Pediat. **41**: 541 (Aug.) 1924.

6. Wilson, O. H.: Carbohydrates in Infant Feeding, South. M. J. **11**: 177 (March) 1918.

7. Lowenberg, Harry: Clinical Experience with Feeding Solids to Sucklings, New York M. J. **111**: 12 (Jan. 3) 1920.

8. Levinson, A.: Oatmeal Gruel in Infant Feeding, Arch. Pediat. **34**: 707 (Sept.) 1917.

9. Mellanby, Edward: Deficiency Diseases, with Special Reference to Rickets, Brit. M. J. **1**: 895 (May 24) 1924.

10. Heller, O.: The Results of Concentrated Infant Foods, Monatschr. f. Kinderh. **19**: 391 (Feb. 19) 1921.

11. Ernberg, Harold: Experiences with Butter-Flour Dietary, Acta Pediat. **2**: 149 (Dec. 16) 1922.

12. Gismondi, A.: Butter-Flour Food of Czerny and Kleinschmidt, Rev. di Clin. Pediat. **20**: 577 (Oct.) 1920.

Holt and Fales [13] state that during every period of life carbohydrates form the greatest part of the diet; that infants on the breast get 50 gm. of lactose in the first month, increasing to 80 gm. daily at the end of the first year; and that it is the most efficient sparer of protein, being for that purpose superior to fat.

Mixsell [14] believes that when a baby is receiving enough food to meet all requirements, the addition of carbohydrates causes an increase in nitrogen retention, but when larger amounts of carbohydrates are given over a prolonged period, disturbance of digestion follows, a negative nitrogen balance being the result. Starches act in the same way as other carbohydrates, but, because of the slow process of conversion and the increased absorption time, there is less chance of digestive disturbances and upsetting of the nitrogen balance than there would be by giving sugar alone.

He [15] also believes that thorough cooking of the cereal is an absolute necessity, for if it is not thorough, say thirty or sixty minutes, on account of the saccharolytic flora, the baby may develop a diarrhea and accordingly will not gain. In his stock formula he used 1 per cent. skim milk.

Heller [16] asserts that the increase or decrease of the water retention depends on the previous feedings as to the content of carbohydrates and proteins in the foods. With a high carbohydrate content there is less urine excreted, while with a high protein content there is more urine excreted with the same fluid intake.

Helmerich and Schick [16] recognize the water retentive value of carbohydrates when they state that "this whole milk-sugar-double food has a number of advantages, not the least among them being the comparative scantiness of the urine." Bakwin [17] states that variations in the blood water were studied in five babies before and after marked increase in weight. In no instance did a significant increase in the blood water occur. The serum protein was little affected. In most instances the weight gains were induced by increasing the carbohydrate content of the feeding. It follows that since increase in weight represents increase in the water content of the organism, the increased amount of fluid is held in the tissues.

Rogatz [18] states that the shape of the stomach after the intake of a meal differs according to the consistency of the meal. He took roentgenograms of the stomachs of infants after fluid feedings and after cereal gruel and vegetable feedings. He found that the stomach is smaller, rounded or circular, with a tiny air bubble at the top after cereal gruel feeding or thick vegetable feedings, while, after a fluid meal, it is oblong, with an air bubble one-third to one-fourth the whole stomach area at the top of the fluid meal. He believes that this peristolic reflex has a profound practical significance in the treatment of cases of pylorospasm and habitual vomiting.

Gain in Weight of Infants Under Cereal Gruel Feeding

Patient	Age	Birth Weight, Gm.	Date of Entrance	Weight, Gm.	Condition	Date Cereal Was Started	Weight, Gm.	Gain in Grams 2 Months Before Cereal	Gain in Grams 2 Months After Cereal	Weight in Grams at 1 Year	Weight at 2 Years, Gm.
1	7 mo.	3,500	3/26/24	5,200	Marasmus	3/26/24	5,200	.....	1,430	9,630	15 mo. 11,450
2	3 wk.	4,310	9/26/23	3,600	Malnourished	4/ 9/24	4,630	630	900	.....	.....
3	6 mo.	5,000	5/14/24	6,630	Fair	5/14/24	6,630	.....	500	.....	.....
4	7 mo.	3,500	1/19/24	4,850	Marasmus	2/ 6/24	5,060	210	2,310	9,750	.....
5	1 mo.	5,760	11/14/23	5,436	Underweight	2/ 9/24	4,000	520	1,450	10,320	.....
6	7 wk.	3,200	12/ 2/22	3,960	Underweight	2/10/23	5,080	940	1,520	10,430	14,260
7	4 wk.	3,550	10/24/23	3,970	Fair	2/24/24	5,670	1,300	1,350	9,800	.....
8	4 wk.	3,100	9/15/23	3,360	Fair	1/ 2/24	5,100	972	1,140	9,680	.....
9	2 mo.	5,700	10/ 2/21	5,000	Good	3/20/22	6,850	900	1,400	10,400	13,900
10	2 mo.	3,000	10/13/22	4,550	Colic	1/20/23	6,000	350	1,325	11,000	14,500
11	4 mo.	3,000	1/23/24	4,810	Ruminator	2/15/24	5,500	690	1,700	10,900	.....
12	2 mo.	3,800	12/ 6/22	4,560	Fair	2/28/23	6,348	1,310	1,670	11,000	13,930
13	6 wk.	3,000	10/17/23	3,480	Fair	1/30/24	4,970	1,520	2,430	9,100	.....
14	6 wk.	3,300	2/27/24	3,700	Fair	5/14/24	5,250	1,170	1,500	10,000	.....
15	4 mo.	3,050	3/12/24	2,800	Marasmus	4/26/24	3,800	1,030	1,400	9,800	.....
16	3 mo.	3,200	2/ 9/24	5,210	Fair	2/16/24	5,300	1,200	1,100	11,000	.....
17	4 wk.	3,650	8/22/23	3,270	Underweight	12/15/23	5,400	600	1,500	8,800	.....
18	3 mo.	4,050	5/21/24	3,480	Marasmus	5/21/24	3,480	Loss	2,000	.....	.....
19	4 mo.	3,500	6/ 2/23	4,930	H. Lip C. Pal	6/20/23	5,100	800	1,700	.....	.....
20	3 mo.	2,350	6/21/24	2,900	Fair	6/21/24	2,900	.....	1,400	.....	.....
21	4 wk.	3,250	9/ 6/24	3,550	Fair	10/ 1/24	3,710	100	900	.....	.....
22	10 wk.	3,410	4/14/23	3,750	Underweight	None	.....	.....	.....	7,850	9,900
23	3 mo.	3,950	4/18/23	4,500	Fair	6/30/23	6,170	1,250	1,830	10,100	13,200
24	4 wk.	3,150	1/28/24	3,000	Underweight	4/30/24	3,500	.....	1,900	8,323	.....
Average	2.7 mo.	3,432		4,115			4,822	630	1,412	10,443	13,231

EXPERIENCE

During the last two years, at the station of the Infant Welfare Society of Chicago, located at the Central Free Dispensary, we selected fifty difficult feeding cases (out of 535 new entrants) in which we gave cereal gruel feedings, after from two to six weeks on various other feedings, with no gain in weight, there being even a loss in some instances and a very poor gain in the majority.

Following are the conditions that were present in this group: (1) prematurity; (2) marasmus (mild and severe); (3) rickets; (4) scurvy; (5) pylorospasm; (6) cleft palate and hare-lip; (7) mongolism; (8) congenital heart disease; (9) furunculosis; (10) congenital syphilis; (11) eczema, and (12) acute infections, as upper respiratory infections, bronchitis, measles and otitis media. The food balance disturbances may be considered as follows: (1) intolerance for fat and sugar; (2) intolerance for cow's milk alone; (3) intolerance for albumin milk; (4) intolerance for breast and bottle; (5) intolerance for all liquid foods, as with habitual vomiting and rumination; (6) those cases in

13. Holt, L. E., and Fales, Helen L.: Carbohydrate Requirements, Am. J. Dis. Child. **24**: 44 (July) 1922.
14. Mixsell, H. R.: The Role of Carbohydrates in Infant Feeding, Arch. Pediat. **33**: 31 (Jan.) 1916.
15. Mixsell, H. R.: Three Years' Experience with Thick Cereal Feedings in Infancy with Malnutrition and Allied Conditions, Atlantic M. J. **26**: 744 (Aug.) 1923.
16. Helmreich, I. E., and Schick, Bela: Concentrated Food for Infants, Ztschr. f. Kinderh. **30**: 363 (Nov.) 1921.
17. Bakwin, Harry: The Water Content of Infants' Blood During Periods of Rapid Increase in Weight, Am. J. Dis. Child. **25**: 406 (May) 1923.
18. Rogatz, J. L.: Roentgen-Ray Studies of Stomach Function; Peristolic Function, Am. J. Dis. Child. **28**: 69 (July) 1924.

which assimilation was presumably good, with stools showing complete digestion but with no gain in weight.

With but four exceptions in the whole series, no starch was found in the stools, and those exceptions showed 0.11, 0.025, 0.15 and 0.43 gm.

Our stock formula was whole milk to the amount of 100 c.c. per kilogram of body weight, with an equal amount of water before 6 months, and 16 gm. of farina, with the farina gradually increased to 48 gm. up to 6 or 7 months. This was all cooked together in a single boiler for fifteen or thirty minutes. The evaporation loss was made up after cooking by the addition of water to the amount required, after which from 20 to 32 gm. of sucrose was added, or 48 to 80 gm. of dextrimaltose, and the whole amount divided into five bottles for the day's feedings at four hour intervals.

To illustrate: If we had a child 4 months old, weighing 4,600 gm., we gave 450 c.c. of milk in twenty-four hours, diluted with 450 c.c. of water, and added 16 gm. of farina, cooking this for fifteen minutes in a single boiler, and adding enough boiled water after cooking to make a total of 900 c.c. To this we added 20 gm. of sucrose and divided it into five bottles of 180 c.c. each. The milk and cereal were increased as the weight advanced, the milk after 5 or 6 months gradually replacing the water, until at 11 or 12 months, whole milk was given.

We speak of our formula as cereal gruel because, with the exception of those infants who had pylorospasm, habitual vomiting, regurgitation or rumination, in which case thick cereal was used, the milk cereal and water mixture was thin enough to be taken through the ordinary rubber nipple, with perhaps some increase in the nipple opening, and there was an equal amount of cereal in all the feedings.

In most instances the cereal used was farina, except when constipation was present, then oatmeal was used at least a part of the time. We believe that other cereals can be used with equal success. There was no age limit at which we began the cereal. It was used with premature infants and from 1 month of age.

The table shows the averages of twenty-four representative cases. The average gain two months before cereal was started was 630 gm., while the average gain in two months after cereal was started was 1,413 gm. This showing is especially good when we consider that all these infants were greatly handicapped to begin with, because of their actual nutritional disturbances and a failure to make a proper gain on any other modification. The children with marasmus made the best gain, while the child with congenital heart disease made the poorest gain.

Many times in our series we noted curds in the stools of children fed on modified cow's milk, and even at times on breast milk, which, on the addition of cereal, with no other change, would soon disappear, and the result would be a more homogeneous stool with greater comfort on the part of the child, and proper gain in weight.

We noted three cases of diarrhea while the infant was on the cereal gruel, in two of which, associated with upper respiratory infection, there was improvement on the disappearance of the infection, while one infant showed persistent intolerance for cereal, and improved on albumin milk.

The outstanding features noted in this series were the uniform gain in weight, especially in the marasmic child; the change from the pale, weak, listless, poorly nourished child to one with a good pink color, firm and abundant tissue turgor, splendid muscular development, proper bone calcification, a happy comfortable disposition and a proper gain in weight. As a routine measure, these children all received phosphorized cod liver oil and orange juice or raw tomato juice.

In this series we reduced the cooking time for starches one-half that previously considered necessary, with practically complete digestion in all instances. Starches act in the same way as other carbohydrates, but, because of the slower process of conversion and the increased absorption time, there is less chance for digestive disturbances.

SUMMARY

1. Cereal gruel and cereal paste are foods of choice in many difficult feeding cases.

2. They can be used for the sick baby and the well baby.

3. They are economical because of low cost of material, and are easily prepared.

4. With the addition of cod liver oil and orange juice, such as would be used with any foods for an artificially fed baby, they produce a condition of nutrition in many respects comparable to that in a properly fed breast baby.

5. We have shown that a shorter period of cooking allows the same digestion of starch as a longer period.

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CHOLECYSTOGRAPHY

THE USE OF SODIUM TETRAIODOPHENOLPHTHALEIN *

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AND
GLOVER H. COPHER, M.D.
ST. LOUIS

In our last article in THE JOURNAL, we [1] stated that we were making clinical use of sodium tetraiodophenolphthalein for cholecystography for comparison with an equal number of patients who were given injections of sodium tetrabromphenolphthalein. Since the publication of this article, Whitaker and Milliken [2] have published their experimental results from a comparison of these two substances.

Sodium tetraiodophenolphthalein was the first substance that we [3] used in an attempt to visualize the gallbladder. The first sample of sodium tetraiodophenolphthalein that we used had different physical characteristics from those of the samples obtained later. The first sample of sodium tetraiodophenolphthalein proved to be more toxic than sodium tetrabromphenolphthalein. The purified product of sodium tetraiodophenolphthalein, which we are now using, is no more toxic in equal doses than sodium tetrabromphenolphthalein. Equally good cholecystograms can be obtained with tetraiodophenolphthalein in much

* From the Department of Surgery, Washington University School of Medicine, and Barnes Hospital.

1. Graham, E. A.; Cole, W. H., and Copher, G. H.: Cholecystography: An Experimental and Clinical Study, J. A. M. A. **84**: 14-16 (Jan. 3) 1925.

2. Whitaker, L. R., and Milliken, G.: A Comparison of Sodium Tetrabromphenolphthalein with Sodium Tetraiodophenolphthalein in Gallbladder Radiography, Surg., Gynec. & Obst. **40**: 17-23 (Jan.) 1925.

3. Graham, E. A., and Cole, W. H.: Roentgenologic Examination of the Gallbladder: Preliminary Report of a New Method Utilizing the Intravenous Injection of Tetrabromphenolphthalein, J. A. M. A. **82**: 613 (Feb. 23) 1924.

smaller doses than with tetrabromphenolphthalein. This is possible because of the difference in the chemical composition of the two compounds.[4] The two factors of significant difference are atomic weight and percentage composition of the two halogens. The atomic weight of bromin is 80, compared to a weight of 127 for iodin. Sodium tetrabromphenolphthalein contains 50 per cent. of bromin by weight, whereas sodium tetraiodophenolphthalein contains 61 per cent. of iodin by weight. These two factors, on which the opacity to the roentgen ray is largely dependent, favor the use of sodium tetraiodophenolphthalein. Whitaker and Milliken also have recognized and stressed these two points of comparison in their experimental study of the two compounds.

Sodium tetraiodophenolphthalein has a molecular weight of 682. It is a light blue, crystalline compound, which is soluble in water to the extent of at least 40 per cent. Sodium tetraiodophenolphthalein is unsatisfactory for colorimetric determinations in the blood and urine. It does not change the color of bile. Intravenous injections of sodium tetraiodophenolphthalein into dogs produces a slight transient fall in blood pressure, similar to that observed after the injection of sodium tetrabromphenolphthalein or the sodium salt of phenolphthalein. Injection of 0.18 gm. of sodium tetraiodophenolphthalein per kilogram of body weight in dogs will produce a roentgen-ray shadow of the gallbladder practically every time. A similar dose of tetrabromphenolphthalein will produce shadows in scarcely 50 per cent. of dogs. The lethal dose of 0.27 gm. per kilogram of body weight is the same for the two drugs.

DOSAGE

A dose of 0.2 gm. per kilogram of body weight of either tetrabromphenolphthalein or tetraiodophenolphthalein does not produce lesions in the liver or other parenchymatous organs. In a recent article, Ottenberg and Abramson[5] express the need for caution in the intravenous injection of tetrahalogenphenolphthaleins, The doses required to produce lesions of the liver, in their experiments, were from four to six times larger than the dose now used per kilogram of body weight for cholecystography of man. We consider this margin of safety absolutely adequate. We have and are now using a dose of 0.053 gm. per kilogram in the human being for satisfactory shadows. Since a dose of 0.2 gm. per kilogram does not produce lesions in animals, it is highly improbable that the dose of 0.053 gm. used in human beings, which is four times as small, would produce any pathologic lesions. Sections of the human liver do not show any lesions after injections of either tetraiodophenolphthalein or tetrabromphenolphthalein in the doses used for cholecystography.

We have alternated the use of tetrabromphenolphthalein and tetraiodophenolphthalein for injection in the last forty-two cases for cholecystography. These cases represent patients that were referred for differential diagnosis. A few proved to have normal gallbladders. We used sodium tetrabromphenolphthalein in doses of 5 gm. and sodium tetraiodophenolphthalein in doses of 3 or 3.5 gm. for persons weighing 60 kg. (130 pounds) or over. This dose of sodium tetraiodophenolphthalein produced shadows of the gallbladder that were fully as satisfactory as those produced by tetrabromphenolphthalein.

4. Graham, E. A.; Cole, W. H., and Copher, G. H.: Cholecystography: An Experimental Study, to be published.

5. Ottenberg, Reuben; and Abramson, H. A.: Production of Liver Necrosis by Tetrachlorphenolphthalein and Tetrabromphenolphthalein, J. A. M. A. **84**: 800 (March 14) 1925.

REACTIONS

The reactions following the injection of sodium tetraiodophenolphthalein were distinctly less marked and fewer in number than after injection of sodium tetrabromphenolphthalein. The accompanying table illustrates the advantage of tetraiodophenolphthalein over tetrabromphenolphthalein from the standpoint of reactions.

A Comparison of Two Series of Twenty-One Cases Each, in Which Sodium Tetrabromphenolphthalein and Sodium Tetraiodophenolphthalein, Respectively, Were Injected

	Sodium Tetrabrom-phenolphthalein		Sodium Tetraiodo-phenolphthalein	
	No. of Cases	Per Cent.	No. of Cases	Per Cent.
No reaction	13	62	18	86
First degree reactions	4	19	3	14
Second degree reactions	1	4	0	0
Third degree reactions	3	14	0	0

The table shows an absence of second and third degree reactions after injection of sodium tetraiodophenolphthalein. We have listed under first degree reactions patients that suffered either a slight headache, vertigo or nausea lasting from a few seconds to ten minutes. Under second degree reactions we include patients that sustained first degree reactions of slightly increased severity for a period of three or four hours. Third degree reactions include patients that had nausea, vomiting, backache, slight tachycardia and temporary fall of blood pressure. Invariably the blood pressure in these cases soon returned to normal. Even the patients suffering the severest reaction showed no evidence or symptoms of it the next day.

TECHNIC

As stated previously, sodium tetraiodophenolphthalein can be made into solutions as high as 40 or 50 per cent. without difficulty. We have arbitrarily chosen a 12.5 per cent. solution (8 c.c. of water per gram) for injection. A more concentrated solution than this may produce necrosis of tissue if injected outside the vein. Three and five-tenths grams of sodium tetraiodophenolphthalein, which is an adequate dose for an adult, is dissolved in 28 c.c. of freshly distilled water. The solution is filtered through a fine filter paper and sterilized in a boiling water bath for fifteen minutes. We have put individual doses in ampules and sealed them before sterilization for convenience. A solution in ampules has been injected without any change in toxicity as long as three weeks after preparation. The solution is given intravenously in two doses, one-half hour apart, in the morning before breakfast, between 7:30 and 9 a. m. Care should be taken not to allow extravasation outside the vein during injection. Solutions made to this dilution may produce induration, but no sloughing of tissue has ever occurred.

The orders for the patient and the roentgen-ray routine are the same as described in previous publications for sodium tetrabromphenolphthalein.[6]

We have had variable and inconstant success in securing shadows of the gallbladder after oral administration of sodium tetrabromphenolphthalein or sodium tetraiodophenolphthalein. This method of administration is being tried at present. Intravenous injection of any compound for cholecystography will always have some advantage over the simplicity of oral administration.

6. Graham, Cole and Copher (Footnotes 1 and 4); Roentgenological Visualization of the Gallbladder by the Intravenous Injection of Tetrabromphenolphthalein, Ann. Surg. **80**: 473 (Sept.) 1924.

After oral administration there are certain variations in intestinal tolerance and in the rate of absorption from the intestine. On the other hand, in an intravenous injection, a known dose is introduced into the blood stream. Dosage is a very important feature of the method. The value of the clinical application of the method is as important as a test of function of the gallbladder, as it is a means of visualizing the organ.

The interpretation of the roentgen-ray shadows is the same for shadows produced by sodium tetraiodophenolphthalein as for those produced by sodium tetrabromphenolphthalein. We have given our interpretation in previous papers.[6]

The reliability of cholecystography for diagnosis of lesions of the gallbladder continues to be very great, in our hands. Reports from other clinics in this country and abroad are likewise favorable as to the reliability of the method. In several hundred cases injection has been made with the halogenated phenolphthaleins for cholecystography. The chief criticism has been concerned only with the toxic reactions. We feel that these will be largely eliminated by the use of the tetraiodophenolphthalein compound instead of the tetrabromphenolphthalein. Dr. Sherwood Moore[7] of the department of radiology has reported a correct diagnosis of gallbladder pathology by cholecystography in 92.5 per cent. of fifty-five cases in which the diagnoses were confirmed by operation. The procedure is particularly valuable in those cases of early cholecystitis in which clinical and other methods of examination leave one in doubt as to the diagnosis.

ACUTE COCAIN POISONING

PRELIMINARY REPORT OF AN EXPERIMENTAL STUDY *

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Acute cocain poisoning, with its all too frequent disastrous sequelae, requires for its treatment the development of a closer understanding of the site and mode of action of this drug.

In laboratory animals as well as in man, respiratory failure invariably precedes cardiac failure in cocain poisoning. Respiratory failure requires artificial respiration. In the past, artificial respiration, though resorted to both clinically and experimentally, has not been very successful. In the rabbit, however, we have been able by artificial respiration alone to raise the lethal subcutaneous dosage from approximately 100 mg. per kilogram of body weight, the usual fatal dose, to from 300 to 350 mg. per kilogram, with return of efficient respiratory center function. In the dog, on the other hand, artificial respiration alone was, in our experience, an inadequate procedure, since we were unable to raise the lethal dosage by this means.

Years ago it was shown that decerebrate animals were considerably more tolerant than normal animals. Furthermore, we were much impressed by the manner in which the respiratory center of the rabbit fails, namely, the respiration becomes more and more rapid and shallow, soon passing into a respiratory flutter or tremor, and then ceasing all activity. In the dog this also is seen, but it is not quite so marked. This would seem to indicate that the center failed in a stage of overactivity or excitability, a "jamming of the mechanism." Since decerebration raises the tolerance, it should follow that a contributory factor in the respiratory failure is some influence of the brain on the respiratory center, in addition to a direct drug action on this center.

With these conceptions in mind, we resorted to the use of hypnotics in both prevention and treatment of cocain convulsions. Our choice for the immediate purpose was either barbital sodium or a mixture of barbital sodium with paraldehyd. With the intravenous administration of 100 mg. of barbital sodium per kilogram of body weight, with 5 c.c. of a saturated solution of paraldehyd in saline solution per kilogram of body weight, we were able to raise the lethal subcutaneous dosage of cocain in the dog from approximately 26 mg. per kilogram to something over 100 mg. per kilogram, an increase of tolerance of approximately 400 per cent. This high tolerance was reached only in those animals to which the hypnotics had been given before the onset of convulsions. If convulsions were allowed to occur, the dosage from which recovery was obtained was lower. Animals allowed to remain in convulsions for five or more minutes recovered only in case they had received not more than 50 mg. of cocain per kilogram. The shorter the time the convulsions were allowed to continue, the greater the dosage of cocain that could be tolerated, up to approximately 100 mg. per kilogram in case no convulsions were permitted; and, reciprocally, the shorter the convulsion period, the greater the chance of recovery.

CONCLUSIONS

1. The hypnotics given as indicated above immediately stop the clonic convulsions.
2. The longer the convulsion period is permitted to continue, the less is the likelihood of recovery.
3. The brain, the evident seat of the clonic convulsions, plays a tremendously important part in the resistance or susceptibility of the respiratory and probably other medullary centers to cocain poisoning.
4. From our own experience and the experience of others, atropin, chloral hydrate, ether and morphin, separately or variously combined, are not satisfactory antidotes for cocain poisoning, either having no significant effect or even actually increasing the dangers.
5. These experiments were done on laboratory animals under controlled conditions, and point to the fundamental underlying causes of death in cocain poisoning as being essentially a summation of direct injury by the drug and the deleterious influence of the cocain-poisoned brain on the medullary centers.

7. Moore, Sherwood: Cholecystography After the Method of Graham, Cole and Copher, read before Midwest Section of the American Roentgen Ray Society, Detroit, Feb. 19-20, 1925.

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Children's Hospital Service in New York.—Special hospital services are available at a minimum expense to deserving school children in about 130 hospitals in ninety cities and villages throughout the state. Practically the same rate is given to school children as is charged to authorities in charge of the poor for similar services. This amounts to a mobilization of the hospitals and dispensaries, and their attending staff, for diagnostic, corrective or other services to our school children. It provides hospital centers to which school medical inspectors can take the children, where they are cared for like private patients and may receive the best modern attention in the various fields of medicine and surgery.—Howe, W. A.: *Am. J. Pub. Health* **15**:307 (April) 1925.

ACUTE SYPHILITIC MYELITIS WITH FATAL ASCENDING PARALYSIS

REPORT OF CASE

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There are numerous articles on chronic syphilitic cord lesions, but comparatively little mention has been made of acute syphilitic myelitis, which so frequently terminates in disaster. Since 1874, when Leyden [1] reported cases of this nature, about 200 cases have been found in the literature. This has been recently reviewed by Cole,[2] who added two cases of his own. Until his report it has been rarely mentioned in this country; but, from the number of cases reported in the foreign countries, one would judge that it is fairly frequent in our country, but not presented to the medical profession. In contrast to the number of acute syphilitic myelitic cases, there is a much smaller number reported from other causes. The largest group encountered is that reported by Phifer and Forster,[3] due to gonorrheal infection, which certainly does not rank next in frequency in producing acute myelitis. Only isolated cases of myelitis due to acute infectious and contagious diseases, hemorrhage, tumor, trauma and bone disease are to be found. The literature shows that syphilis produces, most frequently, acute inflammation of the cord, and in every case it must be thought of first. In 200 cases, as little as two months had elapsed in some from the time of the primary infection until acute inflammation of the cord followed. In Cole's case a secondary eruption was present, and an initial mouth lesion was disappearing at the time of the acute cord signs. Seventy per cent. of the cases ended fatally within from forty-eight hours to four weeks. Numerous cases had had satisfactory methods of antisyphilitic treatment before acute symptoms appeared. The susceptible ages are between 20 and 30. Predisposing factors of fatigue, trauma, sexual excesses and alcoholism are more operative in cord lesions than might be believed. Fournier [4] reported an interesting case that followed a long bicycle race, which produced great fatigue. Practically all the cases reported have occurred in the male sex. The following case is typical of what can be seen in a typical case of acute syphilitic myelitis with a fatal ending:

REPORT OF CASE

A woman, aged 28, a housemaid, single, born of neuropathic parents, was seen, Aug. 23, 1923, with limbs spastic, necessitating the use of a cane. With the exception of neurotic tendencies until 1919, she had been in good health. At this time there developed a weakness and numbness in the left leg. For this, she was under neurologic observation for fifteen months. Some improvement resulted, but she was left with a susceptibility toward stumbling easily. August 1, she felt much fatigued and nervous. August 3, she was awakened from sleep with a sensation of having been suddenly shaken in the whole body, and this was followed immediately by girdle pains, nausea, vomiting and tremor of the limbs, with numbness and tingling.

The examination showed the patient was well developed and well nourished, 5 feet 4 inches (163 cm.) in height, and weighed 140 pounds (63.5 kg.). There was pallor, and a great deal of difficulty in walking, because of tremor and spasticity of the limbs. General nervousness was quite evident, and the impression was at first one of hysteria. In the eyes there was noted anisocoria, sluggish reaction to light, and a larger pupil in the right one. A slight amount of atrophy was present in the disks. Difficulty was experienced in recognizing objects. The teeth were infantile and widely spaced. The neurologic examination by Dr. Alan D. Finlayson revealed that the Romberg sign was moderately positive, and when walking she dragged the left foot in a spastic position. Spasticity was also present with passive movement. The knee jerks were active and equal on the two sides. The Achilles reflexes were very active, the left more than the right. A well sustained ankle clonus was present in the left ankle and left knee. Oppenheim, Babinski, Shattuck and Shaffer's responses were present in both legs. No atrophy was noted, but the limbs were cold and pale. The biceps, triceps and supinator responses were active and equal in the two arms.

The sensory component was superficial. The tactile sense was acute over the body, but most marked on the left side from the foot to the lower costal border. Pain sense was unimpaired. The thermic sense was impaired on the left side to the lower costal border, and on the right side to the crest of the ilium. As to deep sensibility, the muscle tendon sense was impaired in the toes, feet, knees and at the hips. The vibratory sense was impaired in the same regions. The abdominal reflexes were absent on both sides.

The second and third cranial nerves were the only ones to show pathologic change. The right pupil was larger than the left, irregular in outline and sluggish to light. The right fundus showed a well defined pallor of the disk, and the field of vision was narrowed by gross tests.

The blood and spinal Wassermann reaction was four plus. A positive globulin reaction was obtained with the spinal fluid, and 90 cells per cubic millimeter were present. The urine contained a trace of albumin and a large number of pus cells. The erythrocyte, leukocyte, hemoglobin and differential cell count were within normal limits.

August 29, the symptoms were increased, and the patient was sent into the hospital for antisyphilitic treatment. There was some hesitancy on our part in giving arsenicals intravenously for fear of the Jarisch-Herxheimer reaction, and for four days there was rest in bed with cold to the back and symptomatic treatment. During this time a progression of the paralysis affected the arms. The temperature varied from 99.2 to 100.4 F., and respirations from 20 to 24, the pulse rate from 96 to 106.

September 2, 6 gm. of neo-arsphenamin was given intravenously. Twenty-four hours later the condition had grown much worse, with temperature of 102.4 F., respirations 50 and pulse rate 160. The patient was unable to move the upper or lower extremities, and it was evident that an ascending paralysis of the cord was taking place, which would soon terminate in a bulbar death. Death occurred, September 5, and necropsy by Dr. McGinniss showed numerous areas of softening with creamy exudate throughout the cord, but more marked in the dorsal and lumbar regions. No hemorrhage was found. The outline between the gray and the white matter was defined. Microscopic examination showed acute degeneration of the anterior and lateral tracts, with considerable swelling of the axis cylinders. The blood vessels showed considerable round cell infiltration. No gummas were found. It was not possible to examine the brain. Some congestion of the kidneys and spleen was found, with fibrosis of the latter organ. Cystic degeneration of the ovary was present.

COMMENT

The diagnosis was made from the history, symptoms, neurologic examination, and performance of the laboratory tests on the blood and spinal fluid. Cord paralysis is obvious from the sudden paralysis of the limbs and sphincters, with disturbance in sensory sensation. The symptoms of chill, nausea, girdle pains and back pains are typical of this condition. The early

1. Leyden, quoted by Mott, Frederick: Oxford Medicine, Oxford University Press **6**, 1921.
2. Cole, H. N.: Acute Syphilitic Transverse Myelitis, with Report of Two Cases, Arch. Dermat. & Syph. **9**: 102-111 (Jan.) 1924.
3. Phifer, F. M., and Forster, N. K.: Gonorrheal Myelitis, Arch. Int. Med. **32**: 530-537 (Oct.) 1923.
4. Fournier, quoted by Nonne: Syphilis of Nervous System, Philadelphia, J. B. Lippincott Company, 1916.

spasticity of the limbs with hyperactive reflexes soon changed to flaccidity and lost reflexes, as the inflammation in the cord progressed. Ankleclonus, and the Babinski and Romberg signs are always present during some stage of the disease, and sometime Brown-Séquard phenomena are present, also. Trophic ulcers, which are quite often present, were absent in this case.

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Clinical Notes, Suggestions, and New Instruments

AN IMPROVED CANNULA AND TROCAR FOR USE IN PARACENTESIS ABDOMINIS

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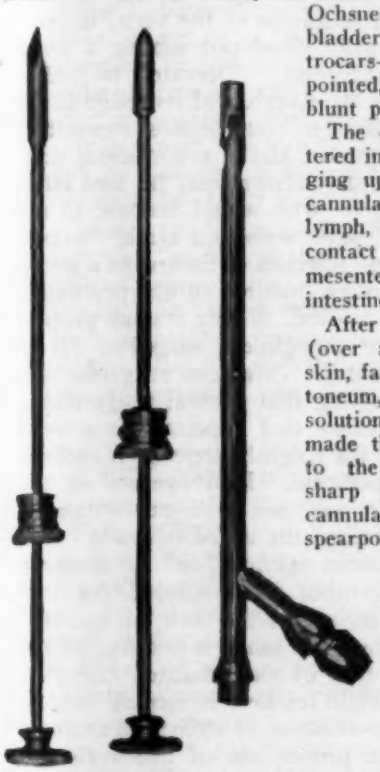
Difficulty in performing an aspiration recently prompted me to devise what I believe is a very practical cannula and trocar. I have had the parts made as illustrated, using an Ochsner cannula for gallbladder paracentesis, with two trocars—one, sharp or spearpointed, and one, rounded or blunt pointed—added to it.



Improved cannula with sharp and blunt pointed trocars.

The chief difficulty encountered in paracentesis is a plugging up of the lumen of the cannula with a blood clot or lymph, or a closing of it by contact with the omentum, the mesentery or a coil of the intestines.

After complete anesthesia (over a small area) of the skin, fascia, muscles and peritoneum, with a 2 per cent. solution of procain, a nick is made through the skin down to the peritoneum, with a sharp pointed scalpel. The cannula with the sharp or spearpointed trocar is introduced through the wound, and the peritoneum is punctured. As soon as the fluid appears in the cannula, the sharp pointed trocar is withdrawn, and the blunt pointed trocar is placed in the cannula, screwed in place, and drawn out far enough to permit free drainage. In case the lumen becomes plugged or in any way obstructed, it is a simple matter to pass the trocar down the length of the cannula and dislodge the obstruction, or to push away from the end any part of the viscera. With the blunt pointed trocar in the cannula pushed to the end, the cannula can be moved about or pushed to a greater depth in the peritoneal cavity without discomfort to the patient or danger to the viscera from the sharp edge of the cannula.

This cannula is the size of a No. 15 F. catheter, and, instead of having one opening at the end, I have added four lateral openings at intervals at the lower end. These openings are on all sides of the cannula, and correspond in size to the diameter of the lumen. With these five openings, it is apparently impossible to close all of them so as to interfere with perfect drainage. Furthermore, a much larger quantity of the exudate or transudate can be removed with this cannula than with the same cannula with only one opening at the end.

While the procedure of tapping the peritoneal cavity is not difficult, I feel that any means that will expedite or facilitate it is of benefit and comfort to the patient, as well as of aid to the operator.

1109 Central Bank Building.

ORTHOPEDIC WRENCH

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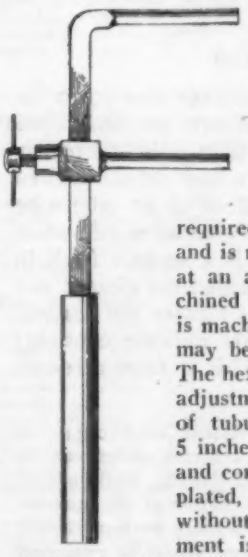
The orthopedic wrench described here is a simple, light substitute for the heavy, cumbersome Thomas wrench, which weighs about three times as much and costs from four to six times as much. I designed this instrument and have used it for some time with highly satisfactory results.



Light orthopedic wrench.

It is constructed of tool steel. A three-eighths inch bar is used, although a five-eighths inch bar is stronger and will probably be necessary when great force is required. The upper jaw is 4 inches long, and is made by sharply bending the steel bar at an angle of 90 degrees. It is then machined round. The lower, or movable jaw, is machined from a 1 inch piece of steel, and may be opened for a distance of 6 inches. The hexagonal nut is tightened as the proper adjustment of the jaws is made. A piece of tubular steel is driven over the lower 5 inches of the wrench, and allows an easy and comfortable grip. The wrench is nickel plated, and may be boiled in the sterilizer without the least damage. When the instrument is used, the jaws should be covered with heavy rubber tubing to prevent undue trauma to the soft parts.

Among the types of conditions in which I have used this wrench are: reduction of dislocated ankle; dislocated astragalus; clubfoot; as an osteoclast in bow legs (young children); impacted Colles' fracture, and dislocation of the carpal semilunar bone. The service of the wrench in these conditions is self evident.

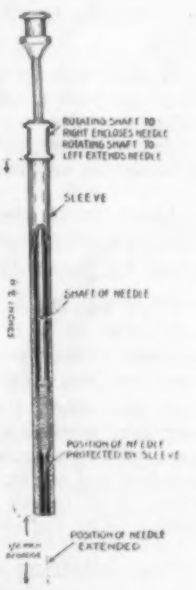
630 Osborn Building.

A NEW INSTRUMENT IN SPLANCHNIC ANESTHESIA

PEYTON R. DENMAN, M.D.
HOUSTON, TEXAS

In performing splanchnic anesthesia, especially in cases in which many adhesions are encountered, I found it most difficult to introduce the needle, and frequently imposible.

In order to facilitate this procedure and to introduce the anesthetic solution successfully in practically all cases, I had an instrument made that makes the introduction possible and safe.


ROTATING SHAFT TO RIGHT ENCLOSES NEEDLE
ROTATING SHAFT TO LEFT EXTENDS NEEDLE
SLEEVE
SHAFT OF NEEDLE
POSITION OF NEEDLE PROTECTED BY SLEEVE
POSITION OF NEEDLE EXTENDED

Needle for performing splanchnic anesthesia.

The instrument consists of a 7 inch needle fitted into a sleeve, which will engage and disengage the point of the needle by a simple rotation of either the sleeve or the needle.

302 Second National Bank Building.

Tissue Culture.—The restraining action of serum on cell multiplication becomes more pronounced after the serum has been shaken for one hour or more, or subjected to the action of heat at 65 C. for thirty minutes.—Alexis Carrel.

Special Article

THE ART AND PRACTICE OF MEDICAL WRITING

V. WORDS *

GEORGE H. SIMMONS, M.D.
Editor and General Manager Emeritus, American Medical Association
AND
MORRIS FISHBEIN, M.D.
Editor, The Journal of the American Medical Association
CHICAGO

(Continued from page 1119)

As bricks are the individual elements that form the structure of the house, so words are the individual elements in the structure of an article. Words poorly chosen or wrongly used, like cracked or discolored brick, may destroy the pleasing effect of an otherwise perfect edifice. The use of long, technical words when short, simple words would suffice is a serious fault in scientific literature. It is axiomatic that the clearer and more simple the story, the better it pleases the reader; long, technical or uncommon words indicate egotism; they are not a sign of erudition. This is from a recent writer:

> Essential for defense, and for protection,—an organ in which everything necessary for the stratagems of retreat, or the offensives of attack, are supplied ad libitum, while everything nonessential or detrimental to the matter of the moment is inhibited, arrested and suppressed—no more perfect sample of the design with which Life is drenched could be imagined by the most closeted of passionate idealists.

Compare the foregoing with this from Sir William Osler:

> A slow, painful progress, through three centuries, science crept on from point to point, with many mistakes and many failures, a progress often marked and flecked with the stains of human effort, but all the same the most revolutionary and far-reaching advance ever made by man's intellect.

Or consider two other comparative examples, the first from a modern neurologist, the second from the famous essay by James Parkinson on the "Shaking Palsy":

> There was ataxia in the upper extremities. Diadokokinesis was good in both hands. A suspicion of asynergia was aroused. There was bilateral papilledema. Hypesthesia was present in one area on the upper extremity.
>
> In this stage, the sleep becomes much disturbed. The tremulous motions of the limbs occur during sleep, and augment until they awaken the patient, and frequently with much agitation and alarm. The power of conveying the food to the mouth is at length so much impeded that he is obliged to consent to be fed by others.

The following example, from an article by a well known dermatologist,

> Eighty-five per cent. of late syphilitics, in our experience, selected with only a reasonable degree of discrimination as to therapeutic outlook, should undergo symptomatic arrest and be ultimately placeable on observation.

might better have been written:

> Eighty-five per cent. of patients with late syphilis, selected with only reasonable discrimination as to possible successful therapy, may become free from symptoms and ultimately be subjected only to renewed observation.

What is here said does not imply that the scientific writer shall write science for the unscientific. The scientific writer is not asked to color or to distort his facts in order to make them intelligible to the multitude. He is merely asked not to hide his facts beneath a mass of coined scientific phraseology and, particularly, of scientific slang.

SOLECISMS

Case.—"Case" is the incidence of a disease, the totality of the symptoms and of the pathologic and other conditions; "patient" is the human being, the man himself. "The case had quite a temperature," "I put the case to bed," "This case was taken ill three weeks ago," "I sent the case out for a walk"—these and similar expressions are found continually in manuscripts; the error nearly always is in using "case" for "patient," seldom the reverse.

To Operate.—A flagrant disregard of the rules of grammar is the deplorable misuse of the verb "to operate," which has gradually developed among a small group of American surgeons. "Operate" is both a transitive and an intransitive verb, and its usage in the two forms is clearly defined in even the most elementary grammar. "Operate" means, and is synonymous with, "to work": the terms nearly always may be used interchangeably. The surgeon who would hesitate to say "I worked this patient" says, without a blush, "I operated this patient." This solecism is limited to a group that represents one in seven hundred of our population —the medical profession—and, to only a small proportion of that group—to thoughtless surgeons. It is also limited to this country. American surgeons who justify themselves by saying that general usage makes correct usage should realize that "operate" is a word in general use wherever the English language is spoken; it is not limited to medicine. Men operate on the board of trade, but no one, not even our surgeons, refer to them as "operating" the board of trade. Our linotype "operators" cannot operate "on" the linotype machines; trained machinists are employed for that purpose. Even if this misuse of the verb "to operate" were limited to medicine, good usage is not that of the careless minority, but that of the educated majority. The pity of it is that certain teachers in medical schools —professors of surgery—instead of setting an example to their students in the proper use of this verb, are responsible for the spread of its improper use.

"Cystoscope," "Obstetricate," "Explore," etc.—The following appeared in a manuscript recently received:

> It was decided that the patient should be explored with the expectation of finding an acute appendix.

Such a decision once made, the surgeon did not hesitate; he explored his patient. Another surgeon was not so courageous:

> We have contemplated having some of our inoperable cases collapsed by thoracoplasty, but have delayed.

And another physician, finding the English language rather too small for his purpose, perpetrated this monstrosity:

> In a case in which I obstetricated at birth.

Thus, patients are "collapsed," "explored," "operated" and even "obstetricated." Such usage of intransitive

* This is the fifth of a series of articles. When concluded, these papers, together with additional material, will be published in book form.

verbs in the transitive sense has no justification in the laws of grammar, nor in the usage of people of even ordinary education. Even less justification exists for transposing ordinary common nouns into verbs which do not exist. Astronomers never telescope the sky; bacteriologists never microscope their slides; but urologists do not hesitate to cystoscope their patients. Far worse, however, is the conversion of proper names of scientists into verbs describing procedures that they have evolved or discovered. The bacteriologist who would not microscope his slides will "Schick" one patient, or even "Wassermann" another.

Ambiguous Pronouns.—An author sometimes refers to himself in one place as "the writer," in another as "the author," in a third as "I," and in still another as "we." He may then use the pronoun "we" with reference to the medical profession or the public in general, and refer to the writer of some previously cited article as "the author." Careless use of the personal pronouns makes it impossible to tell when the author is referring to himself and when to some other person. An author should refer to himself in the same terms throughout. The use of the first person singular—I, me—is the clearest and most satisfactory usage. When an author is reporting work done in conjunction with others, it is proper for him to use the pronoun "we," provided he has stated who are represented by the "we," so that the reader will not be confused.

Temperature and Fever.—It is incorrect to say that a patient had "no temperature." "No fever" or "no elevation of temperature" may be used. "Temperature normal," or "higher than normal" or "subnormal" also are satisfactory. Better still, if the temperature is normal, it should be so stated; if abnormal, it should be given in terms of the Fahrenheit or Centigrade scale.

Proper Names.—On one page of an article on tabes appeared the following terms or "eponyms" to indicate tests or reactions: Cheyne-Stokes, Babinski, Trumpell, Marie-Foix, Klippel-Weil. While it is historically interesting to have a sign, test, reaction or disease known by the name of its discoverer, it is in the interest of scientific medicine to use a descriptive term. Certainly, "reflex rigidity of the pupil" is better than Argyll Robertson sign; great toe reflex is preferable to Babinski phenomenon; exophthalmic goiter better than Basedow's disease. When a discovery is credited to several writers, the matter becomes complicated by the fact that national pride may assign a different name to the disease in several different countries. In most instances, it will be found far more satisfactory to use a descriptive term rather than to designate any sign or symptom by the name of the often alleged discoverer.

Medical Jargon.—The peculiar usages of words which have been described are among the most frequent violations of correct use of English terms. There are, in addition, many words that have found their way into medical vocabularies with unusual meanings that are not recognized even by medical dictionaries. Such writings may properly be characterized as medical jargon or medical slang. When these words appear in medical manuscripts or in medical conversation, they are quite unintelligible to other scientists, particularly those of foreign countries; they are not translatable; they are definitely the mark of the careless and uncultured man.

A number of these terms are given here, with the definition and the correct words following:

Jargon	Correct Term
acute abdomen	acute conditions within the abdomen
cardiac	patient with heart disease
chronic appendix	chronic appendicitis
chronic ear	chronic otitis media
collect cases of	collect instances of
Dakin's, Dakin's solution	solution of chlorinated soda
flu	influenza
lues, luetic	syphilis, syphilitic
multip.	multipara
neisserian disease	gonorrhea
organ or structure is negative	organ or structure is normal
pathology	pathologic change, disease
primip.	primipara
prostatic	patient with hypertrophy, inflammation, etc., of prostate
serology	changes in the blood
sleeping flu	epidemic encephalitis
sleeping sickness	trypanosomiasis
suspicious of	suggestive of
specific stomach	syphilis of the stomach

Preferred Usages.—Among other usages which frequently appear in medical writings, and which, while not incorrect, are susceptible of improvement, are:

Word	Preferred Usage
adrenal	suprarenal
amidst, amongst	amid, among
apparatuses	apparatus
autopsy	necropsy
Basedowoid	hyperthyroidism, or term descriptive of the condition
Bright's disease	chronic interstitial nephritis
cane sugar	sucrose
cure	treatment; these two words are not interchangeable
ciweissmilch	albumin milk
enteric fever	typhoid
functionating	functioning
Grave's disease, Basedow's disease	exophthalmic goiter
guts	intestine
Hebrew, Israelite	Jew, Jewish
hypodermatic	hypodermic
individual	person
in extremis	moribund, dying
intraspinous	intraspinal
microphotograph	photomicrograph
milk-sugar	lactose
pediatrist	pediatrician
polynuclear	polymorphonuclear, when referring to leukocytes
round-celled	round cell
sacrificed	killed
spotted fever	specify disease meant, such as typhus or cerebrospinal meningitis
x-ray	roentgen ray
x-ray picture	roentgenogram

Spelling.—The editor or reader of manuscripts who judges a paper full of misspelled words is likely to have small respect for the knowledge of the writer and for the attention he gave his manuscript. To spell incorrectly is a sign of a lack of education, but more often it means carelessness. Even a poor speller can use a dictionary. The physician who permits an ignorant typist or copyist to submit for him a manuscript full of wrongly spelled words is revealing evidence of carelessness or ignorance on his part—not on the part of the typist.

When words have different spellings, the writer should adopt one form. A list will be submitted later of many words for which different spellings exist. (For words not included, the press of the American Medical Association follows the American Illustrated Medical Dictionary for the words it contains, and the Standard Dictionary for all others. When two or more forms are given in the dictionary, the one given first should be followed.)

Official Nomenclature.—Certain scientific bodies, including the American Chemical Society, International Zoological Congress, Bureau of the Census, and American Roentgenologic Association, have adopted official codes of nomenclature. Ordinarily, the writer will do well to follow the terms and spellings established by such organizations.

(To be continued)

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SATURDAY, APRIL 18, 1925

MEDICAL ASPECTS OF "BOOTLEG" LIQUORS

To ferret out the truth with regard to the behavior of alcohol in the human organism seems to be a herculean, if not an almost superhuman, task. Many of the apparent incongruities are confusing even to the clear-headed student of the alcohol problem. Little wonder, therefore, that the less critical person no longer trusts any "expert" pronouncement on this subject, whether it be from the standpoint of its physiologic, toxicologic or sociological aspects. On the one hand, alcohol is "pronounced by authorities" to be a food; on the other hand, it is said, with equal emphasis, that "the only legitimate use for alcohol is in the arts and sciences," and eminent physicians are quoted to oppose the use of the substance as a beverage. The apparent clash of judgments is not confined to the debatable questions of moderate drinking; it is reflected even in the interpretation of cases in which harm is revealed beyond question. The opponents center their attack on alcohol itself in any dose, large or small, and in any dilution, high or low. The apologists for alcohol charge the "impurities" it contains and the abuses of liquor with responsibility for the most objectionable features of its use. Even in this respect the point of attack changes from time to time. Not long ago, the alleged unwholesomeness of the most objectionable alcoholic liquors was attributed to the vague component termed fusel oil. Thus, it has been stated as "reasonable to suppose that the fusel oil, rather than the alcohol, contained in cheap whiskeys is responsible for some cases at least of chronic alcoholism, particularly when we know that many inebriates prefer the cheap adulterated liquors as being stronger than the better brands."[1] Yet, so far as it can be applied to the explanation of alcoholism, the fusel oil hypothesis has proved to be mostly an unscientific myth.

Again, in contrasting the prevalent "moonshine poisoning" with the alcoholism of the prewar and preprohibition variety, Gerty[2] of Chicago believes that significant differences can be detected. He asserts that the type of poisoning now seen differs from ordinary alcohol poisoning in the following ways: The poison takes effect more rapidly, and the patient is brought to the hospital sooner because of the gravity of his symptoms. A smaller amount of the prevalent beverages is required to incapacitate. The effect is more profound and more often fatal. Mental deterioration is a common sequel, even after a few sprees. As far as the mental symptoms are concerned, the clinical picture is usually blurred, thus making classification of cases more difficult.

Methyl alcohol, particularly in its cruder guise of wood alcohol, has undoubtedly been responsible for serious physiologic injury and death in the last few years. For the most part this has been due to the unwarranted assumption of the untutored that alcohol is alcohol, regardless of such subtleties of the prenomen as methyl, ethyl, propyl, butyl or amyl, all of which are finding a place in the postwar vocabulary of everyday life. In some instances, methyl alcohol has been consumed unwittingly as the result of fraudulent practices in adulterating "alcoholic" beverages. It is a strange circumstance that widespread credence has been given to an allegation that pure methyl alcohol is less toxic than grain spirits or ethyl alcohol, the poisoning attributed to the former being ascribed to impurities. Somehow, each variety of alcohol seems to find an apologist. Hunt[3] of the Harvard Medical School, who has made extensive investigations in this field, regards the claims as to the comparative innocuousness of methyl alcohol as untenable, although it seems to be true that some samples of wood alcohol contain allyl alcohol, which is much more poisonous than methyl alcohol itself, in amounts sufficient to increase distinctly the toxicity of the wood alcohol. Pure methyl alcohol, however, is much more poisonous than ethyl alcohol. The cause of this difference, Hunt contends, is obvious when the pharmacologic action of the two alcohols is considered: although there are certain limitations to its use, ethyl alcohol is a food whereas methyl alcohol has, for practical purposes, no value whatever as a food. The body can quickly and almost completely oxidize (and utilize) moderate amounts of ethyl alcohol, but it has great difficulty in either destroying or excreting methyl alcohol. The latter remains in the body for long periods and, probably with its oxidation products (formic acid and probably formaldehyd), has a very injurious action, especially on the eyes.

According to government regulations, ethyl alcohol may be "denatured" or unfitted for human consumption by addition of a large variety of toxic substances.

1. Flint, G. E.: The Whole Truth About Alcohol, New York, the Macmillan Company, 1919.

2. Gerty, F. J.: Clinical Effects of So-Called Moonshine Liquors, Am. J. Pub. Health **14**: 603 (July) 1924.

3. Hunt, R.: Pharmacology of Alcohol, Indust. & Engin. Chem. **17**: 427 (April) 1925.

As illicit liquor is popularly stated to be derived in many instances through purification and redistillation of the commercially available "denatured" alcohol, one might expect to find some of these poisons in "bootleg" liquor. It is reported that thus far the chief ingredient found which is not present in genuine whisky to the same extent has been acetaldehyd. Hunt hesitates to believe that this compound is responsible for the deleterious effects of spurious liquors; for, as he points out, acetaldehyd is only seven or eight times as poisonous as ethyl alcohol itself, and in the samples analyzed there was on an average about fifteen hundred times as much alcohol as acetaldehyd. A person would have to consume almost his own weight of the liquor in order to get a fatal dose of acetaldehyd; of course, he would die of alcohol poisoning long before he could get a dangerous dose of the aldehyd.

Hunt's own investigations of samples of illicit liquors alleged to have caused death in man have demonstrated their toxicity for animals to be fully accounted for by the ethyl alcohol they contained; he is inclined to think that, unless the victims of such poisoning had taken something besides the liquor analyzed, the results were due to the quantity of alcohol drunk or the manner in which it was taken, rather than to its quality. The depth of intoxication and the danger to life depend, as Hunt points out further, on the concentration of alcohol in the blood, and this is determined not only by the amount of alcohol taken but also by its concentration. There is a rather small margin between the amount of alcohol necessary to cause deep intoxication and that sufficient to cause death; hence, if a person takes a large amount of strong alcohol within a short time, he may get enough to cause not only intoxication but also death. This devious search for the subtle mysterious poison of "bootleg" liquors brings us back to alcohol—ethyl alcohol—as the alpha and omega of the problem of alcoholism from the medical standpoint.

THE POSSIBILITY OF RECOVERY FROM DIABETES UNDER INSULIN

In view of the fact that some patients with diabetes, especially the young, show an increased ability to utilize carbohydrates after insulin treatment, the possibility has been present that the functional capacity of the pancreas may improve under the influence of the partial rest afforded by the insulin. The actual opportunity to demonstrate an anatomic basis for such a clinical improvement is naturally rare. Recently such an opportunity occurred in the service of Boyd and Robinson[1] of the University of Toronto. A boy, aged 9 years, who was known to have had diabetes since he was 2 years old, began treatment in December, 1922. Under insulin it was possible to provide him with a diet sufficient for a boy of his age, and under a year of treatment his tolerance to carbohydrate increased threefold. His physical condition improved correspondingly, and it was stated that from a chronic invalid in 1922, he became the leader of the "gang" in 1923. He was killed by accidental fracture of the skull when sleigh-riding. He lived only about three hours after the receipt of the injury, and an immediate postmortem examination was made.

Because of the quick action taken in securing so prompt a necropsy that the pancreatic tissue could be fixed in suitable hardening fluids within thirty minutes after death, it was possible to study the labile elements of the islands of Langerhans, and the findings are of great interest and importance. None of the anatomic changes commonly found in diabetes were present, but this of itself is not significant, for severe anatomic changes are not always present even in fatal cases of diabetes. Such negative findings have been pointed out by many observers and serve to prove that functional capacity of the islet cells, as determined by clinical laboratory tests, is, after all, the final criterion for determining the ability of the individual to utilize carbohydrates. On the other hand, changes were seen that may be interpreted as evidence of regeneration of the cells of the islets, which sometimes were definitely hypertrophied; also, there was an apparent increase in number, although these findings themselves have little positive value. More important is the fact that the so-called B cells of the pancreas, which are believed to be most concerned in carbohydrate metabolism and the ones that have been described as first destroyed in severe diabetes, were in this case either normal or increased in number.

The findings in the case reported by the Toronto investigators suggest the possibility that there has been regeneration or formation of new islets in the pancreas since insulin treatment was begun, which would explain the observed rise of sugar tolerance in this boy. The authors state that the distribution and prominence of the islets in the peripheral portions of the pancreas suggest very strongly that they are new islets forming in the natural growth of the pancreas. Presumably the insulin treatment, by relieving the strain placed on the already functionally deficient islet system, allowed the new islets to develop and assume their normal functional capacity.

While it is self-evident that the study of a single case cannot afford any final proof, especially with such a difficult subject as the question of histologic changes in the islands of Langerhans, nevertheless, the case reported by Boyd and Robinson has been studied under exceptionally favorable conditions, and because of the infrequency with which such valuable material can ever become available, is of great significance. At the least, it is an encouraging item of

1. Boyd, Gladys L., and Robinson, W. L.: Evidence of Regeneration of Pancreas in an Insulin Treated Case of Diabetes, Am. J. Path. 1: 135-146 (March) 1925.

evidence of particular value in this early period of insulin therapy that, at least in juvenile diabetes, there may be the possibility in some cases of an actual anatomic improvement, which means a real and permanent benefit for the patient.

A RECORD NEURAL ACTIVITY

In the days, nearly a century ago, when the once widely quoted "Bridgewater Treatises" were being prepared for publication, much emphasis was placed on the perfections of the human body. The ascendency of man was attributed not only to his superior intellect, but also to the excellence of the mechanical adjustments and the chemical processes, which in most cases surpassed human comprehension. It was a scientist no less eminent than William Prout, discoverer of the acid of the gastric juice, who called attention to "all the beautiful adjustments and adaptations of noxious and conflicting elements most wonderfully conspiring together for good," as evidences of design in nature. In the course of time, however, the development of our knowledge of both the physical and the natural sciences has revealed such a wealth of surprising phenomena in almost every field of scientific research as to make most of the "wonders of the ancients" seem trivial by comparison. Scarcely a day passes that the press does not record some item of scientific curiosity related to objects ranging all the way from the depths of the earth to the nebula in Andromeda, the light from which, according to the recent estimation of Aubble, requires nearly a million years to travel to the earth.[1]

With the revelation of these marvels has come a disposition to belittle the devices of the human mechanism and to point to their comparative imperfections. We are reminded that the eye is a less perfect optical instrument than some of those of human invention. The limitations of some of the senses in respect to delicacy of perception are brought out by comparison with the remarkable range of stimulation or response that certain forms of modern physical apparatus exhibit. Many years ago Johannes Mueller ventured to suggest that the rate of conduction of a nerve impulse must be extremely rapid, approximating perhaps the velocity of light. Yet the actual measurements, first adequately carried out by Helmholz, showed the velocity of the nerve impulse to be a comparatively slow process, not exceeding a magnitude of 100 feet a second.

To offset these unsympathetic tendencies to belittle the majesty of the human organism, it is worth while to recall some of those niceties of performance that remain undimmed in physiologic grandeur. Thus, Mills[2] has recently cited a remarkable example of the actual complexity and rapidity of human nervous actions. A celebrated pianist has actually been ascertained by Sir James Paget to have played 5,995 notes in four minutes and three seconds, rather more than twenty-four notes a second. In calculating the variety of nervous impulses that must have been transmitted between the brain and muscles, including the conscious sensations involved, Paget estimated that "there were at the rate of ninety-six transmissions of force from the ends of nerve-fibers, along their course to the brain, in each of the same seconds during which there were seventy-two transmissions going out from the brain along other nerve-fibers to the muscles. And then add to all this that, during the time, in each second of which the mind was conscious of at least ninety-six sensations, and directed not less than seventy-two movements, it was also remembering each note to be played in its due time and place, and was exercised, with a judgment, in the comparison of the playing of this evening with those of the time before, and with some of the sentiments which the music was intended to express." Surely this is no mean performance, even in the days of radio marvels.

Current Comment

THE MODERN CLINICAL THERMOMETER

Few instruments of precision can vie with the clinical thermometer in their frequency of application in medicine or their practical usefulness in the management of disease. It may seem strange to many that physicians now living can recall the day when the clinical thermometer was by no means universally available for professional work. Garrison assures us in his History of Medicine that neither Keen nor Tyson saw a clinical thermometer or a hypodermic syringe during 1862-1865. Although thermometry is by no means a novelty in medicine, the earlier instruments for the measurement of body temperature were only slowly adopted and transformed into the present-day type. The credit of the invention of the thermometer has been attributed chiefly to Sanctorius of Padua and to Galileo. The first instruments seem to have been made toward the close of the sixteenth century. Garrison remarks that the clinical thermometry "dreamed of by Sanctorius, and coquetted with by Boerhaave, Haller and de Haen" was revived in the classic essays of the Scotsman George Martine in 1740. Fahrenheit replaced spirit by mercury in the thermometer in 1720 and, after several attempts at graduation, introduced the scale that now bears his name. The use of the centigrade instrument dates from Celsius in 1742. It is scarcely more than half a century since thermometers began to come into what may be termed common use in medicine. There are, of course,

1. A readable account of many of the interesting features of modern scientific research is given by Harris, F. E., and Butt, N. I.: Scientific Research and Human Welfare, New York, the Macmillan Company, 1924.

2. Mills, C. K.: An Electrical Theory of Neural Energy, Arch. Neurol. & Psychiat. 13:155 (Feb.) 1925.

numerous instances of earlier thermometric records of body temperature. The instruments then in use were about 10 inches long; so large, in fact, that it took at least five minutes for them to register the axillary temperature, and so clumsy that, as Brunton relates, they were carried under the arm "as one might carry a gun." Even more cumbersome must have been the instrument with which William Beaumont made the classic observations on Alexis St. Martin, his patient with a gastric fistula. The army surgeon recorded his purpose "to ascertain the variation in temperature in the interior of the stomach under different circumstances and conditions of the system and vicissitudes of the atmosphere." Nearly a century ago, Dec. 6, 1829, Beaumont made this note:

> At 9 o'clock a. m., I introduced the glass tube of a thermometer (Fahrenheit's) through the artificial opening into the stomach, in a healthy condition, nearly the whole length of the stem. In six or eight minutes the mercury became stationary at 98.

The recent death of Sir Clifford Allbutt affords proper occasion to pay tribute to his resourcefulness, which led to a reduction in the size of the thermometer used in clinical medicine. To him is due the invention of the pocket thermometer of physicians in 1868. In place of the cumbrous instrument of his predecessors, he devised a new form suitable for carrying in a portable case. It is only one of his noteworthy achievements, yet a contribution that influences the daily performance of an entire profession.

CRITICISM AND HYPERCRITICISM

The human mind delights in extremes of statement; antithesis is a favorite form in which to express dissent in the course of debate. As a rule, the facts lie somewhere between the antipodal positions. Danger often lies in a statement uttered in the fervor of enthusiasm, without recognition of the uses to which the unqualified statement may be adapted. For example, at the Annual Congress on Medical Education, recently held in Chicago, a speaker remarked that "the modern education of the physician lays undue stress on the laboratory in diagnosis, and neglects the study of the symptomatology of the onset and the course of a disease. The teaching of older clinicians has been forgotten in the worship of faithless idols, and the present day is searching for new specifics to cure and for easy short cuts to diagnosis. The physician of today has forgotten that typhoid and the pox were well known and diagnosticable long before Widal and Wassermann were born and before the causative germs of these diseases were discovered." Now it is no disparagement of the older clinicians (whose five senses were probably at times in error quite as the more objective laboratory tests of today are) to direct attention again to the bacterial etiology of the infectious diseases. Through only a few avenues are the secrets of the sentient human body revealed. As Lee [1] has said, from the beginning of the human race these avenues have not changed, and it is one of the achievements of modern scientific medicine that along them have been found innumerable clues of which physicians of even a century ago had no conception. Scientific diagnosis, though it is still far from the ideal and still finds itself too often mistaken, has in recent years made great strides. This is due largely to the fact that exact physical and chemical methods for detecting disease have come into use. Physicians are no longer dependent on the unaided senses. We may recall with pride the progress that has followed the more accurate diagnosis associated with the Widal and Wassermann tests. Fearless and forceful criticisms of our science are thoroughly welcomed and are essential for the wholesome development of medicine. What ought to be scrupulously avoided, however, is possible injury of the good in the effort to eradicate the bad.

1. Lee, F. S.: Scientific Features of Modern Medicine, New York, Columbia University Press, 1911.

THE FORMATION OF HIPPURIC ACID

Hippuric acid is a component of the urine that has long commanded attention because of the appreciation that its physiologic rôle is different from that of the other nitrogenous catabolites excreted by the kidneys. The output may range from a small minimum, through an average of 0.75 gm. daily, up to several times that amount under conditions of normal health and function. Hippuric acid represents the effort of the organism to eliminate products that are difficult of oxidation, in a form that is harmless. Thus, benzoic acid and benzoates are removed after synthesis with the amino-acid glycocoll to form hippuric acid. The process is one of the devices of the body for detoxicating an otherwise objectionable substance. The origin of the glycocoll (amino-acetic acid) involved in the reaction has been a problem of especial interest. Is it derived from preformed fragments in the tissue proteins or is it produced de novo for the needs of the detoxication process? The latest studies of Swanson [1] at the University of Minnesota indicate that this production of glycocoll goes on at the expense of nitrogenous groups that ordinarily would be catabolized to form urea. The content of the latter in the urine, other factors remaining unchanged, tends to be lessened after ingestion of benzoates and corresponding production of hippuric acid. As there is at such times no evidence of retardation of excretion or accumulation of urea in the blood, it seems probable that constituents which, during ordinary metabolism, enter into the composition of urea may in part be synthesized to glycocoll when the latter is required. There is no reason to assume that such a reaction is the expression of toxic disintegration in the organism. Despite a large output of hippuric acid induced by large intake of benzoic acid, the total daily nitrogen elimination may remain unaffected. Evidently, body protein is not specially attacked to provide the glycocoll needed for the synthesis of the hippuric acid.

1. Swanson, W. W.: The Effect of Sodium Benzoate Ingestion on the Composition of the Blood and Urine, with Especial Reference to the Possible Synthesis of Glycine in the Body, J. Biol. Chem. **62**: 565 (Jan.) 1925.

Association News

ANNUAL CONGRESS ON MEDICAL EDUCATION, MEDICAL LICENSURE, PUBLIC HEALTH AND HOSPITALS

Held in Chicago, March 9, 10, 11 and 12, 1925

(Continued from page 1126)

AMERICAN CONFERENCE ON HOSPITAL SERVICE

DR. S. S. GOLDWATER, New York, in the Chair

MARCH 12—MORNING

The Extension of Hospital Privileges to All Practitioners of Medicine

DR. S. S. GOLDWATER, New York: This article appeared in full in THE JOURNAL, March 28, 1925, p. 933.

Hospital Facilities and the Medical Profession in the United States

MR. HOMER F. SANGER, Chicago: This article appeared in full in THE JOURNAL, March 28, 1925, p. 950.

Educational Opportunities of the Open Hospital

DR. MALCOLM T. MACEACHERN, Chicago: In the present period, hospitals, regardless of whether they are closed, semi-closed or open, are expected to offer educational opportunities to the intern and the physician practicing his profession therein. These opportunities vary in the different types of institutions mentioned, there being advantages and disadvantages worthy of consideration in order to make all the hospitals valuable teaching centers. The open hospital offers many educational advantages to the profession as a whole, but possibly some disadvantages to the intern, owing particularly, to the frequent lack of definitely organized effort on his behalf by the medical staff of the hospital. What the intern secures in an open hospital may, in many instances, be almost entirely from his own individual undirected efforts; and thus on himself depends, to a great extent, the real value of his internship. No doubt, the intern finds difficulty under the present system generally in vogue in open hospitals in knowing to whom he is responsible. Direction, supervision and checking up of the quality of his work is lacking, unless definite organization and provision is made to take care of this matter. He may find it difficult serving so many chiefs or masters, especially when only a few of them take a personal interest in his clinical and scientific advancement. Generally speaking, however, he has in the open hospital access to a wider range of clinical material, providing a broader and more varied experience. His work, in part, frequently consists of medico-administrative activities, and thus he secures a training along important executive lines.

Notwithstanding all this, I believe that the open hospital, with proper medical staff organization and the development of the right attitude or relation of the staff to the intern, could greatly improve the educational opportunities for interns generally. However, after all, is it not, to a great extent, up to the intern himself as to what he gets or does not get out of his internship? The trend of medical education today is to train the mind of the student to make him a better thinker, observer and investigator. If he can be sent out into the field with an investing mind, I have little fear but that he will get a great deal out of any hospital in which he is an intern, regardless of type or character. Such an intern will blossom forth later into a practicing physician with the right attitude of mind to seize the unlimited educational opportunities always available through active contact with well regulated hospitals of any kind.

In a properly organized and managed open hospital today, the profession, as a whole, profits much through the educational facilities and opportunities offered; and, indeed, we find the general average ability of the aggregate medical profession in any community where such a hospital exists much higher than that found where there is a closed hospital offering educational and environmental advantages to a restricted group. It may be truly said that the intern and the physician working in the hospital today have as yet not taken full advantage of the unlimited educational opportunities offered by the open hospital. These, however, can be made of greater advantage to all if more attention is given to definite effective organization along educational lines which is, to a great extent, lacking in a large majority of our open hospitals today.

Educational Opportunities of the Closed Hospital

DR. A. C. BACHMEYER, Cincinnati: The term "closed" refers to the organization of the medical staff, and infers that only those physicians and surgeons who have been definitely appointed or elected to staff positions shall have the privilege of attending the patients who are admitted to the hospital. This type of organization lends itself best to close supervision and to control of the medical and surgical work of the hospital. The men forming such a staff are chosen more carefuly and should be chosen not only because of their ability and competence as practitioners, but also with consideration for their ability as teachers. Each physician practicing in a hospital, while an individual, becomes a unit in the hospital organization. The closed staff enables him to function better as such a unit and at the same time offers many advantages over the "open" staff for the development of team work among the physicians and surgeons and for the development of whole-hearted interest in the institution. Though we are interested and are emphasizing the importance of education, it must never be forgotten that "the care and treatment of the patient is the paramount purpose and function of the hospital." Organization and equipment should be such as will bring to the patient every possible facility for prompt, competent and comprehensive diagnosis and treatment. Complete medical and surgical service must be rendered, if full advantage is to be taken of all opportunities for education. The educational advantages of the hospital may be discussed with reference to the patient, the hospital personnel, the community, the undergraduate medical student and nurse and the graduate physician and nurse.

The patient: Instruction should be given relative to causes producing his illness and means of prevention of any recurrence. The community: Our knowledge of prevalence of disease is based on mortality statistics. Hospitals and dispensaries should serve as the basis for compilation of morbidity statistics and better knowledge of conditions. Hospitals should actively join in community health programs. The hospital personnel: This should be instructed not only with reference to its duties, but with reference to personal hygiene, periodic health examinations, etc. The student nurse: Hospitals are the vital factors in nurse education. Opportunities for development of the best nursing courses are greatest in closed hospitals. The medical student: The hospital serves as a clinical laboratory or a field of practical education. The closed hospital is essential for this purpose because of the opportunity for systematic teaching. The student should be introduced to the clinical aspect of medicine as early as possible in his career. He should first be taught in hospital wards before going into dispensaries. Graduate instruction: The intern year is the most valuable of all the years spent in medical college. Hospitals should develop definite programs of instruction for the intern. There should be intern meetings for review of work, seminar hours, journal assignments and abstract meetings, staff lectures and demonstructions. Beyond the intern year: Graduate medical instruction should be given leading to higher degrees in university or college hospitals. There should be short, intensive courses in diagnosis and therapy for physicians of the vicinity.

The teaching hospital offers distinct advantage to: (1) the patient, because of the facilities for diagnosis and therapy and the competent service given; (2) staff members, because they must apply themselves and remain progressive or be superseded; (3) the intern, because of the attention he must pay to patients; (4) the medical student, because of practical instruction and contact with experienced physicians; (5) nurses, because of examples of well trained physicians at work; (6) the community, because of the high type service

to be obtained in such a hospital; (7) the profession at large, because of the opportunity to consult with proficient men and to do research work as graduate students; (8) the hospital, because its reputation and standing in the community will be enhanced.

CONFERENCE ON MEDICAL AND HEALTH EDUCATION OF THE PUBLIC

DR. JOHN M. DODSON, Chicago, in the Chair

MARCH 12—AFTERNOON

Campaign of Health Education

DR. JOHN M. DODSON, Chicago: There is a growing consensus among physicians, public health workers, educators and others that the universal medical and health education of the public is the most fundamental and essential element in any health program. Pure water and food, sewage disposal, quarantine against contagion, and other hygienic devices are needful but secondary. Says Sir George Newman, "The mere increase of knowledge, and particularly the knowledge of preventive medicine, or the ways and means of personal hygiene and well-being, can do nothing of itself to prevent disease and to safeguard health unless it be understood, accepted and practiced." How can we bring about the understanding, the acceptance and the practice of the great body of knowledge which we have gained of preventive medicine, so pregnant with possibilities of good to the race? Much of this information must come from the medical profession. The physician is coming to see that in addition to his function as the family physician he can render an even larger service often times, as health adviser. But how is the medical profession to make the public see and realize this fact? That is the theme of this afternoon's discussion. The several speakers will discuss some of the pedagogic methods which are available in this campaign of health education.

EDUCATING THE PUBLIC

By Means of Bulletins and Journals

DR. HERMAN N. BUNDESEN, Chicago: Health in a salable commodity, and there is an eager market for it. The health department of a community is the logical source of health information and publicity. To get health news to the public in the right way is a great problem and too often a neglected feature by health authorities. After much thought and experimentation on the problem of getting health news to the lay public, and borne out by local results, the following general conclusions are reached: 1. Health news and medical matters must be brought down to the average intelligence of the newspaper-reading public. 2. There should be one timely medical or related topic to the issue. This serves to focus the mind on the one subject, and, if treated simply, brings home a lesson. This is the prime purpose of health education. Also it is necessary to make the topics seasonable and anticipate local health events. 3. Generally, lay readers of health matters will not read or are impatient with a lot of figures and tabulated statistics. 4. The text of the bulletin should be illustrated. To the general reader, facts are brought home by pictures. Not only this, but it helps to hold the interest of the reader. 5. Readable print, well spaced, properly headed and paragraphed, good quality of paper, mailed in a way to suggest a small magazine instead of a handbill advertisement, all help to evoke the interest of the laity in health matters. 6. If thought and care with the lay reader in mind in publishing a health bulletin is made manifest, the great agent of publicity, the daily newspaper, becomes a valuable aid in furthering health education. 7. Since the bulletin is the means of informing the public of health department work, its success may be measured by the hearty cooperation of all business elements and other activities of the city in not only obeying the health laws but in lending a hand in keeping the next fellow in line. 8. A very important point in selling health is the telling of positive health. It is better to show how to keep well than to exhibit or relate matters of disease to the degree of disgusting or the evoking of horror in the reader. An optimistic point of view and a cheerful attitude in a health publication for lay readers get better results than gloomy, terror-evoking reading material and pictures. The "do's" should predominate over the "don'ts."

By Means of Newspapers

DR. MORRIS FISHBEIN, Chicago: The newspaper is the greatest medium for medical education of the public. A house to house investigation made in one of our large cities showed definitely that the great majority of persons acquired their health information from the daily newspaper. The plans devised at the headquarters of the American Medical Association for checking medical news at the source, and for providing newspapers with accurate facts regarding new medical discoveries are as follows: In the handling of medical conventions and congresses, which constitute matters of news, arrangements are made to secure from each author, at least three weeks preliminary to the meeting, an abstract of from 200 to 500 words of the main points to be brought out in his address. These abstracts are assembled and then worked up into running accounts, which are sent to the large press services, including the Associated Press, Science Service, the United Press, the United News, the Consolidated Press and the International News Service, for issuing directly to newspapers. In this way the newspapers of the country are provided well in advance of the sessions with basic material, the accuracy of which can be guaranteed, since it emanates directly from the authors of the papers themselves, and since the high lights are picked out and the general articles prepared at the headquarters office of the American Medical Association by persons familiar both with medicine and with newspaper methods. In addition to supplying newspapers with medical news of conferences and congresses, the American Medical Association has arranged to reply directly to inquiries from individual editors concerning special stories that may arise in their vicinity. In this manner, much unauthentic and unsatisfactory medical news has been held up, and stories that had real news value were properly approved. We are able through our press clipping services, which cover medical news throughout the United States, to tell to just what extent the news material sent out is used by newspapers, and to determine the particular topics in which newspapers may be interested.

More and more we are being called on by newspapers for special verification of news items, and there is no doubt that the service has great value in giving to the public the correct point of view as to medical developments. We have found that, so far as news matter is concerned, editors are just as anxious as are physicians to be certain that material published is accurate and that it will do no harm. Editors will do well to scrutinize with care any newspaper item which gives undue prominence to the remarkable skill of any individual physician. After all, the medical procedures that live are not the property of any one man. Even more important are the attempts of organizations devoted primarily to the raising of funds, or composed of promoters of unestablished and unrecognized methods for the treatment of incurable diseases, to utilize newspaper publicity to bring to them the inquiries of the uninformed public. During the last annual session of the American Medical Association in Chicago, an organization composed almost wholly of individuals promoting unusual and unestablished methods of treating cancer held a special session in one of the large hotels. Evidence is available that newspaper offices were called and asked to send reporters to this meeting, the invitation being accompanied by the announcement that sensational matter would be presented. Several newspapers did send reporters, and the following day papers throughout the United States carried announcements as to two new discoveries for the cure of cancer, neither of which was in any way established, neither of which had an actual scientific background, and neither of which has been extensively heard of since. The only way in which any newspaper can protect itself against such material is to rely on a publicity committee of a local medical organization, which will be able to provide information as to the scientific status of the men concerned and as to the actual basis for such discoveries. This recommendation has been made and put into effect in some communities, including, for

example, Kansas City, Minneapolis and Oklahoma City, and in each case the publicity committee of the county medical society is able to advise newspapers that are anxious to cooperate in avoiding the machinations of the publicity hound.

The newspaper health column is a significant development in modern health education methods. There can be no doubt that properly conducted columns of this kind are a valuable feature in the medical education of the public. It is significant in this connection that certain "patent medicine" advertisers make their advertising simulate the health column in order to attract the unwary. This exploiting of the health column brings in, in a hidden manner, the names of secret preparations which must be secured at a drugstore, and the purchase of which results in profit to the advertiser. The advice is in no sense of the word disinterested or scientific. There are also, of course, health columns written by men who are perhaps not particularly qualified, either by medical training or by literary ability, to inform the public, but whose names in themselves constitute a source of attraction to newspaper readers. Finally, there are such series of articles as are now being syndicated by the American Child Health Association, which constitute a regular feature of many papers, and which have distinct value in educating the public both because of the character of the material and because of the nature of the organization responsible for it.

The medical profession today is attempting to form some organized method for supplying newspapers with material and yet preventing injustice through the overadvertisement of individual physicians, and through the furnishing of details concerning the personal lives of patients which the public should not have. If county medical societies and other medical organizations will arrange, through proper publicity committees, to supply newspapers with dependable material and to have on their publicity committees men who will make it their business to find out what constitutes medical news, so that they may cooperate properly with the newspaper man, the good that will accrue from proper education, both to the public and to the medical profession, will be immeasurable. I think I am safe in saying that the medical education of the public is the one certain method of overcoming the evils of quackery, of cultism, and of medical fraud.

By Means of Addresses and Radio Talks

DR. HUGH S. CUMMING, Washington, D. C.: I regard the radio lecture more as a means of inducing the listener to seek information than as a method of conveying the information to him. The individual listener may be intensely interested in what he hears, and while a certain amount of valuable information may be communicated to him, he cannot remember all that is said. With regard to the actual speech itself, it is my experience that the lecture should not be too long. At present, the lectures delivered by the Public Health Service require, as a rule, a maximum of about ten minutes for their delivery. These lectures must contain worth-while information. The information must of all things be accurate. Questions on which there is a difference of opinion as between competent medical authorities should usually be avoided. Subjects about which we know little or nothing should generally be excluded. It must be remembered that the radio lecturer is talking to a mixed audience; nothing should be said that might not be repeated with perfect propriety by an adolescent youth to the girl who is listening in with him, or which they could not discuss with each other. The story of the lecture should be told preferably in conversational style and in simple language. We should be careful in a radio lecture not to frighten the sick. There are many sick people who listen to these lectures. If one is discussing diabetes, for example, or tuberculosis, one should not dwell on the dark side of the picture nor say too much about the frequency of a fatal termination. The Public Health Service prepares lectures for forty-eight cooperating broadcasting stations distributed throughout the United States. We also have one cooperating station in Canada. In addition, these lectures are mailed to other agencies, which use them in various ways. Many of our lectures are converted into articles for newspapers and magazines. These lectures are being used in some manner in a number of foreign countries, including Holland, Russia, Palestine and Chile.

By Means of Health Expositions and Exhibits

DR. WILLIAM A. O'BRIEN, Minneapolis: The first health exposition of which there is any record was the Cincinnati Sanitary Fair of 1862, which was conceived and directed by Gen. William S. Rosecrans. The purpose was to call attention to the filthy condition of the town, and to point out the measures by which communicable disease could be checked. In 1921, the idea of calling attention of communities to health ideas was revived in Cincinnati. The fundamental difference between the two expositions was that the second included a pageant of progress as well as a protest against existing conditions. Similar expositions have since been held in many cities, and the attendance and interest have been very gratifying. The expositions consist of exhibits by health and social service agencies. There is an afternoon and an evening program of lectures and entertainments. School children are given free tickets, and all civic and commercial organizations join in the idea of fostering community health. Competitive health contests for infants and adults are held. Physical examinations of the type advocated as a periodic health measure are given without charge to adults. The University of Minnesota Medical School participated in an exposition held in Minneapolis in May, 1924. Booths designed to teach medical facts through the use of actual demonstrations were utilized. A teaching personnel of 300 was formed from the faculty and the student body. Actual specimens of breast cancer were used to teach the public that cancer of the breast always starts as a small, hard lump. The circulation of the blood in the web of the frog was of unusual interest. White rats from a nutritional experiment were shown. Statistical methods also were successful. Charts based on data obtained from 70,000 tuberculous persons who sought sanatorium care were used, and the percentage of arrests by groups was shown. A parallel exhibit showed (1) a normal lung with a normal roentgenogram; (2) incipient tuberculosis; (3) moderately advanced tuberculosis; (4) advanced tuberculosis, with accompanying plates, depiciting the progress of the disease as a quantitative affair. One of the common objections to vaccination is that "prevention is worse than the disease." Large photographs paralleling the course of smallpox and vaccination created a different impression in the minds of some of these people. Medical education was presented through a combined panel and model exhibit.

By Means of Periodic Examinations of Apparently Healthy Persons

DR. JOSEPH L. MILLER, Chicago: Lessening of the incidence of disease and consequent reduction of mortality has been one of the creditable accomplishments of preventive medicine. A large field in preventive medicine is the detection of disease in its incipience, before it has given rise to symptoms which would lead the patient to consult a physician, and correction of habits of living, or personal hygiene which predisposes to disease. As an illustration are cancer, tuberculosis, hypertension, beginning cardiac impairment, diabetes, obesity, constipation and infected tonsils. These conditions can be detected only by the systematic examination of the apparently healthy. This problem offers many difficulties: It cannot be performed by the state or federal government. The family physician must be called on to render this service. The cost will also interfere with its adoption. Only the well-to-do can take advantage of it unless the cost can be reduced beyond present levels.

Diet of School Children.—The importance of the correct feeding of children in schools cannot be overestimated. The dietary should be adequate as regards calory value; it should also be well balanced as regards the proportionate proximate principles, and it should be generous as regards vitamin content. The dietary should contain a full allowance of readily assimilable protein food, fresh, wholesome milk, butter or drippings, and, above all, an adequate amount of fresh vegetables and fruit, such as oranges and apples — Willcox, W. H.: *Practitioner* **114**:3 (Jan.) 1925.

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION, PUBLIC HEALTH, ETC.)

ARKANSAS

Health Officer Appointed.—Dr. Austin F. Barr, health officer of Beauregard Parish, Louisiana, has been appointed officer in charge of the recently approved full-time health department of Hot Springs.

CALIFORNIA

Evolution Taught.—The state board of education went on record, April 3, as favoring the teaching of evolution in the public schools of California, but only as a theory.

Fraudulent Diplomas.—The Sacramento *Bee*, January 29, published a press dispatch dated Chicago, January 29, referring to the arrest of "Yellow Kid" Weil, which relates that said person had "forged degrees from the Universities of Berlin, Jena, Heidelberg, Sorbonne, in addition to honorary degrees from Harvard and degrees supposed to have been conferred by the late czar of Russia."

DISTRICT OF COLUMBIA

Personal.—Dr. John T. Sprague, for two years chief of the division of contagious disease, District Health Department, resigned, April 1, in order to engage in private practice.

GEORGIA

Personal.—Dr. Forrest L. Cosby, Jr., recently of Miami, Fla., has accepted the charge of the recently established orthopedic service in the City Hospital, Columbus.——The city health officer of Atlanta, Dr. John P. Kennedy, has announced the opening of a free clinic for the prevention of diphtheria in children, to be held every afternoon at the health department.

Health Week at Atlanta.—The mayor of Atlanta has issued a proclamation designating May 10-16 as "Health Week." This period includes the days on which the Georgia Medical Association meets in Atlanta. There will be short addresses in churches, May 10, and before civic bodies by visiting physicians on other days, and a health parade on Friday, in which the medical and dental professions, the Anti-Tuberculosis Association and Red Cross, nurses' association, schools and other groups interested in health, will take part.

ILLINOIS

Physicians Warned.—The city council, Decatur, passed a resolution requiring the city attorney and police to report to the council each week the names of physicians issuing prescriptions, also that of the pharmacy dispensing the liquor and the name of the patient. The council warns that unless physicians and pharmacists show more respect for the prohibition law their privilege of issuing liquor on prescription will be forfeited.

Chicago

Dinner to Dr. Kraepelin.—A dinner has been proposed in honor of Dr. Emil Kraepelin, who will visit Chicago, April 17, in company with Dr. F. Plaut (THE JOURNAL, April 4, p. 1057). Members of the Chicago Medical Society who wish to attend this dinner should notify the secretary of the Chicago Neurological Society, Dr. Lewis J. Pollock, 25 East Washington Street (Randolph 0244), at once.

Society News.—Among those who will address the Chicago Ophthalmological Society, April 20, at the Hotel Sherman, will be Drs. George F. Suker and James E. Lebensohn on "Osteomata of the Orb" with report of cases and stereopticon illustrations.——The next meeting of the Chicago Urological Society will be, April 23, in the John Crerar Library Building.——Dr. Robert P. Parsons, U. S. N., Great Lakes, Ill., addressed the Chicago Neurological Society, April 16, on "Tryparsamide and Sulpharsphenamin in the treatment of Neurosyphilis."——Dr. Jacob J. Mendelsohn addressed the Chicago Tuberculosis Society, April 16, on "Some Phases of Tuberculosis Dispensary Work," and Dr. Alexander A. Maximow on "Tuberculosis in Vitro."——Dr. Ludvig Hektoen and William H. Welker, Ph.D., addressed the Chicago Pathological Society, April 13, on "Crystalline Proteins in the Urine."——The April 15 meeting of the Chicago Medical Society was a joint session with the Northwest Branch. Dr. George O. Solem spoke on "Duodenal Obstruction Due to Harris Bands," and Dr. George H. Schroeder on "Primary Carcinoma of the Lung." The discussions were opened by Drs. Elmer E. Henderson, Frederick Tice and Theodore Tieken.

INDIANA

Memorial Service for Dr. Hurty.—Former vice president of the United States, Thomas R. Marshall, was the principal speaker at a memorial meeting at the Athenaeum, Indianapolis, March 31, in honor of the late Dr. John N. Hurty. The organizations represented included the Indiana State Medical Association, the Indianapolis Medical Association, the Indiana Dental College, the Indianapolis Dental Society, the Indiana University School of Medicine and the Indianapolis Literary Society. Dr. Joseph R. Eastman, president, Indiana State Medical Association, presided.

Society News.—Dr. William H. Foreman Indianapolis, addressed the Grant County Medical Society, Marion, recently, on "The Bowel Syndrome."——Dr. William Gillespie, Cincinnati, recently addressed the Muncie Academy of Medicine on "Posterior Position of Occiput."——Dr. George A. Wyeth, New York, addressed the St. Joseph County Medical Society, recently, at South Bend on "Endothermy."——Dr. William A. Spencer, Wolcott, has been elected president of the White County Medical Society; Dr. Reid Ringer, Monon, vice president; Dr. Homer B. Gable, Monticello, secretary, and Dr. George R. Clayton, Monon, treasurer.

KANSAS

New Board of Regents.—A law becomes effective, July 1, creating a board of regents, which has the authority and duties formerly conferred on the state board of administration, relating to the University of Kansas, Kansas State Agricultural College and its experiment stations, and the Kansas State teachers colleges of Emporia, Hays and Pittsburg. The board will be composed of nine members appointed by the governor for a term of four years and will have the power to appoint and remove the executive heads, deans, professors and employees of the state institutions.

KENTUCKY

Epidemic of Typhoid.—It is reported that the epidemic of typhoid fever at the mining town of Wolfpit amounted to seventy-six cases, April 6, and that five persons had died.

LOUISIANA

Liquor Permits Endangered.—The divisional prohibition chief, A. R. Harris, has asked that the liquor permits of thirty New Orleans physicians and druggists be revoked for violation of prohibition regulations.

State Medical Meeting.—The annual meeting of the Louisiana State Medical Society will convene in New Orleans, April 21, under the presidency of Dr. Charles V. Unsworth, the first meeting of the house of delegates being April 20. Official headquarters will be at the Roosevelt Hotel.

Ninth Shreveport Physician Arrested.—A warrant was issued, March 30, for the arrest of Dr. Edgar B. Hands, Shreveport, on a charge of violating the Harrison Narcotic Law. Dr. Hands is the ninth physician in Shreveport, it is reported, charged with violating the narcotic law since the federal investigation at Shreveport began a few weeks ago.

Physician Surrenders.—Dr. John L. Pittman, Cedar Grove, gave himself up, April 6, to the U. S. marshal, it is reported, to begin serving a three months' sentence imposed by Federal Judge Dawkins months ago on a charge of violating the Harrison Narcotic Law. Dr. Pittman appealed to the federal circuit court at New Orleans. The case was heard two weeks ago (THE JOURNAL, July 12, 1924, p. 126).

MARYLAND

Nurses' Home at Johns Hopkins.—The contract for the construction of the new nurses' home for Johns Hopkins Hospital has been awarded. It will be erected on Broadway, opposite the hospital grounds. The building, costing about $650,000, will be eight stories high, fireproof, and will accommodate about 240 nurses. The design will be Italian Renaissance.

Joint Meeting.—A joint meeting of the Baltimore City Medical Society and the Medical Society of the District of Columbia was held, April 15, at 1718 M Street, Washington. A special car from Union Station, Baltimore, carried members to and from Washington. The program was "Symptoms of Coronary Occlusion," Dr. Louis Hamman; "Surgery of Biliary Disease," Dr. A. C. Harrison, and "Intestinal Protozoa," Robert W. Hegner, Ph.D., professor of protozoology, School of Hygiene and Public Health, Johns Hopkins University.

MASSACHUSETTS

Malden Hospital News.—The staff of the Malden Hospital, Malden, has not resigned. The resignations reported in THE JOURNAL, April 4, p. 1055, were those of the medical board, which was an advisory body.

Appointment at Harvard.—Harry C. Trimble, Ph.D., assistant professor of chemistry, University of North Dakota, University, N. D., has resigned to become assistant professor of chemistry at the Harvard University Medical School, Boston.

Society News.—Dr. Milton J. Rosenau addressed the Boston Medical History Club, March 16, on "Epidemiology in the Bible." Dr. Rosenau spoke particularly of an epidemic of bubonic plague described in the First Book of Samuel, Chapters 4-7.——Drs. Harvey Cushing and Percival Bailey addressed the Harvard Medical Society at the Peter Bent Brigham Hospital, March 24, on "Histologic Classification of Gliomas and Its Prognostic Significance."

MICHIGAN

Society News.—Dr. Frank N. Wilson, professor of medicine, University of Michigan Medical School, Ann Arbor, addressed the medical section of the Wayne County Medical Society, Detroit, April 13, on "Treatment of Heart Disease." A dinner preceding the meeting was given in the society building in Dr. Wilson's honor.——Dr. Frederick C. Warnshuis, secretary of the Michigan State Medical Society, recently visited the Wayne County Medical Society to determine just what the state society could do in fulfilling its duty to the Detroit society.——Dr. Clarence H. Burton addressed the Detroit Academy of Medicine, April 15, on "Some Doctors of Early Detroit."——A subscription dinner is being arranged in honor of Dr. Frederick W. Robbins, for some time in May. Dr. Robbins will retire from practice this summer.

MINNESOTA

Professors Emeriti Appointed.—The board of regents of the University of Minnesota, Minneapolis, have made Henry F. Nachtrieb, head of the department of animal biology, and Richard O. Beard, associate professor of physiology, professors emeriti, effective at the beginning of the next school year. Professor Nachtrieb has been head of his department since 1887 and was for a number of years president of the General Alumni Association of the university. Dr. Beard is the only remaining member of the original medical faculty.

Dr. Strachauer to Direct Cancer Institute.—It was announced, April 3, that Dr. Arthur C. Strachauer, for seven years professor and chief of the department of surgery, University of Minnesota Medical School, Minneapolis, has resigned that position to become director of the new George Chase Christian Cancer Institute at the University. This institute, which will open July 1, was made possible through the Citizens Aid Society by Mrs. George Chase Christian, and combines research facilities with a fifty bed hospital. It will serve indigent persons and for the study of the cause of cancer and means of its prevention. Dr. Strachauer will also continue in private practice.

Mayor's Committee Disagrees.—The committee of six, appointed by the mayor of Minneapolis (THE JOURNAL, January 31, p. 376) to investigate the situation at the general hospital has submitted a majority and a minority report, adopted by four and two members, respectively. The final disposition of the matter has not been made public. One question for consideration was whether the general hospital should be moved from its present location to a site on the university campus. The *Journal-Lancet* says the failure of the committee to agree may imperil the provisional gift of $1,500,000 from the General Education Board and make the raising of additional funds either through the legislature or by public subscription more difficult.

State Medical Meeting.—Dr. Frank Billings, Chicago, will address the annual meeting of the Minnesota State Medical Association, Minneapolis, April 28-29, on "Periodic Medical Examinations"; Dr. William D. Haggard, Nashville, president-elect, American Medical Association, will give a clinical demonstration in the medical and surgical joint section and speak at the banquet at the Radisson Hotel, at which Dr. William J. Mayo, Rochester, will be toastmaster. Dr. Edward Starr Judd, Rochester, will speak on "Substitute Medical Defense," and Dr. Herman M. Johnson, on "State Legislation." A special effort has been made this year to present a well rounded program, and a large attendance is requested. A series of clinics will be presented by the Hennepin County Medical Society, Thursday, April 30. Members of the clinical section of the society who contemplate holding operative clinics, May 1 and 2, should advise Dr. William A. Jones, 406 Physicians and Surgeons Building, Minneapolis, at once.

MISSISSIPPI

State Medical Meeting.—The fifty-eighth annual meeting of the Mississippi State Medical Association will convene at Biloxi, May 12, under the presidency of Dr. James J. Haralson, Forest. The first meeting of the house of delegates will be at 8 a. m. The new state board of health will be nominated at this meeting in accordance with the recent Mississippi law which requires that eight of the ten members of the board be nominated to the governor by the state medical association. Things "other than scientific" on the program include boat trips on the gulf, dinner dances and fishing. Headquarters will be at the Hotel Avelez. The Woman's Auxiliary has arranged an interesting program for the wives of members.

MISSOURI

Washington University Bequeathed a Million.—Through the death of Sir W. Northrup McMillan, former St. Louis capitalist, at Nice, Paris, March 22, Washington University, St. Louis, will receive more than a million dollars for the establishment of a hospital to be known as the "McMillan Eye, Ear, Nose and Throat Hospital." Mr. McMillan's mother, who died in 1914, provided that should her son die without issue, the residue of her estate should go for this purpose.

Amendatory Medical Bill Dies.—The bill introduced in the recent legislature at the request of the Missouri State Medical Association to amend the medical practice act died when the legislative session ended. This measure, which made it a felony to practice medicine without a license, was passed by the senate without amendments. In the house, amendments were attached to the bill, exempting chiropractors, Christian scientists and osteopaths. The state board's requirement of two years' college work for admission to a medical school was abolished and an amendment adopted making four years in high school sufficient. Thus amended, the house passed the bill. The state medical association refused to accept these amendments and the senate refused to adopt them. Under these circumstances the bill died.

State Medical Meeting.—The sixty-eighth annual meeting of the Missouri State Medical Association convenes at Kansas City, May 5-7. The House of Delegates holds its first meeting, May 4. All meetings will be at the Baltimore Hotel. There will be numerous clinics held on the morning of each day, at the general hospital, the general meetings for reading scientific papers convening in the afternoons. Dr. Morris Fishbein, editor, THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, will speak at the president's reception on "Mirrors of Medicine," and Dr. John M. Dodson, secretary, Bureau of Health and Public Instruction, American Medical Association, will discuss periodic health examinations. The Woman's Auxiliary will hold its first annual meeting at the Muehlebach Hotel. Wives and daughters of members are especially invited to attend and take part in the work of the Woman's Auxiliary. Entertainments have been arranged for the ladies who attend the meeting. Jackson County Medical Society will give a smoker to members of the state association, Thursday evening, May 7.

Revocations Approved by St. Louis Society.—The council of the St. Louis Medical Society, April 8, adopted these resolutions:

WHEREAS, Dr. Emmett P. North, a member and former president of the St. Louis Medical Society, is now president of the Missouri State Board of Health, which board has assiduously and persistently during many months endeavored to rid the state of persons and medical schools involved in the medical diploma mill scandal; and

WHEREAS, The board has revoked the licenses of several physicians found guilty of trafficking in the sale of medical diplomas; and

WHEREAS, The board has cited some sixty physicians to show cause why their licenses should not be revoked; therefore, be it

Resolved, That the Council of the St. Louis Medical Society fully realizes that Dr. North has sacrificed his time and personal interests during all the months of the investigation by the board and has directed the activities of the board in a fearless, courageous and capable manner; and be it further

Resolved, That the Council hereby extends its earnest commendations to Dr. North and to the board of health for the work they have done in the fight to rid the state of undesirable and unqualified persons in the medical profession.

The board thus far has held two sessions, revoking the licenses of Drs. Waldo Briggs, Anna Golstein, Otto C. Hanser, Hugo L. Baepler, Adolph M. Krall, all of St. Louis, and Dr. Thomas R. Moore, Maplewood. Dr. A. John Lofgreen, Kirkwood, and Dr. William F. Wagner, St. Louis, surrendered their licenses to the board, acknowledging that they were guilty as charged. Drs. Walter L. Kelley, Affton, and John Buschmann, St. Louis, were exonerated by the board. All together, about sixty physicians have been cited to show cause why their licenses should not be revoked, and the board will resume its sessions for the other trials at a date to be announced.

NEBRASKA

New Bureau Chief.—The governor recently appointed Dr. William H. Wilson, Lincoln, chief of the bureau of health. Dr. Wilson practiced for many years at Table Rock and represented Pawnee County in the legislature in 1903 and 1905, and was senator from the first district in 1907, state health inspector from 1907 to 1915 and state epidemiologist from 1918 to 1921.

Society News.—Dr. C. A. Bradley, Beatrice, recently addressed the Gage County Medical Society on "Psychosis," and Dr. Clifford P. Fall, Beatrice, on "Infant Feeding." Dr. Charles S. Curry, Beatrice, was elected president and Dr. Frederick W. Buckley, Beatrice, secretary-treasurer.—— Dr. Joseph D. McCarthy, Elgin, has been elected president of the Madison County Medical Society and Dr. Edward L. Brush, Norfolk, secretary. The Stanton County, Pierce County and Antelope County physicians have affiliated with this society. Dr. John D. Reid, Pilger, addressed the society on the Schick and Dick tests and gave clinical demonstrations.

NEW JERSEY

Child Hygiene.—Following demonstrations by the Bureau of Child Hygiene, the financial obligation of teachers of child hygiene have been assumed by the following communities: New Brunswick, Clayton, Egg Harbor City, Gloucester City, Boonton and Hopewell Township, and requests for demonstrations have been received from nine other communities in which nurses are expected to be placed shortly. The bureau continues technical supervision of this work, and is giving a course in infant hygiene to mothers in the Clinton Reformatory for Women.

Deaf-Mutes Drive Automobiles.—An opinion was given, April 2, by Attorney General Edward Katzenbach, to the motor vehicle commission, to the effect that driving permits must be issued to all persons who comply with conditions of the automobile laws. The question was raised by a bill enacted by the last legislature providing for the licensing of deaf-mutes. He states that "common experience has not shown that a deaf person cannot with safety operate an automobile." It was also stated that of 500 licenses given to deaf-mutes in institutions at Malone, Rome and Rochester, not one had yet been involved in an accident.

NEW YORK

Memorial Tablet.—A tablet in memory of Dr. Thomas Passmore Berens was dedicated, March 28, at the Manhattan Eye, Ear and Throat Hospital. Dr. Berens, who died Dec. 28, 1923, was actively identified with the institution for thirty-three years.

Antispitting Campaign.—Under the auspices of the National Tuberculosis Association, an antispitting campaign was started, March 23. Circulars, posters and a manual entitled "A Public Revolt Against Spitting" were distributed. As a preliminary demonstration of this campaign, a campaign against expectoration was promoted by the association under the direction of Mr. Anderson, and in cooperation with the Syracuse Health Department and the Onondaga County Tuberculosis Association in that city.

Society News.—In place of the regular meeting, March 11, the Richmond County Medical Society gave a testimonial dinner to Dr. Walker Washington at the Staten Island Masonic Club, to commemorate his fortieth year in the practice of medicine. Dr. Washington has been practicing at Tottenville since the year he was graduated, 1885.——Dr. Daniel N. Eisendrath, Chicago, will address the genito-urinary section of the New York Academy of Medicine, April 22, on "Strictures, Kinks and Abnormal Insertion of the Ureter."

Commission for Survey of Crippled Children.—Senator Byrne has been appointed chairman of the New York Commission for the Survey of Crippled Children, and the survey is to be made under the direction of Henry C. Wright, director of the Hospital and Institutional Bureau of Consultation. New York is the first state to make official inquiry into the existing and necessary resources for the care of crippled children. The commission will study the number, distribution and condition of all crippled children between birth and 18 years of age, and inquire into the facilities for medical, surgical and convalescent care, and education and maintenance. The following definition of the crippled child has been adopted:

A crippled child is one whose activity is or, due to a progressive disease, may become so far restricted by loss, defect or deformity of bones or muscles as to reduce his normal capacity for education or for self-support.

New York City

To Teach Children Safety.—The American Museum of Safety, in cooperation with the state department of labor and the board of education, working through the heads of the continuation and evening schools, has inaugurated a campaign for the prevention of accidents to children in industry. The campaign is the result of a report from the state department of labor showing that in one year 1,983 children were seriously injured while at work in factories in New York. One of the first steps in the campaign will be to have every pupil in the continuation schools visit the museum at 120 East Twenty-Eighth Street, where almost every device known for the prevention of industrial accidents is on exhibition.

Drive for Medical Center.—At a luncheon at the Bankers' Club, April 1, a drive to raise $2,000,000 for the balance of the Presbyterian Hospital's part of the Medical Center, to be conducted from May 1-15, was announced. A mass meeting will be held at Carnegie Hall, April 30. Nicholas Murray Butler, LL.D., president, Columbia University, will speak. The Presbyterian Hospital, in conjunction with Columbia University Medical School, will form the nucleus of the Medical Center for which excavation has been started. The two institutions will occupy jointly a $10,000,000 building, the hospital's share of the cost being $7,000,000. The Columbia-Presbyterian unit of the center will be ready for occupancy the latter part of 1926.

Welfare Council Established.—The initial step in establishing a welfare council for this city was the appointment of a board of directors of seventy-five members, including representatives of the public and of the city's philanthropic and social agencies, and ex officio, the members of various city departments. The plan submitted provides for the immediate appointment of a staff and the opening of executive offices; $50,000 has been contributed to meet the expenses for the first two years. The task is to bring together 2,000 diversified welfare agencies on a basis of voluntary but methodical cooperation. These agencies now spend $80,000,000 annually. They will be coordinated by voluntary grouping into divisions and sections. The board of directors will study the social needs and resources of the city, utilizing all facilities for cooperation that now exist.

Child Health Meeting.—A national conference on child health was held at Columbia University, New York, under the auspices of the Institute of Arts and Sciences, March 25. Dr. George T. Palmer, director of research, American Child Health Association, gave statistics of a recent survey, showing that for every 1,000 babies born in eighty-six cities with populations of from 40,000 to 70,000, seven mothers gave up their lives. The water supply in only sixty-seven cities was above suspicion. Of these cities, only twenty-one have their milk supply pasteurized. Forty cities now have parental clinics and seventy have health centers for infant care and instruction. Among the speakers were Dr. Haven Emerson, professor of public health administration at Columbia University College of Physicians and Surgeons, and Dr. Philip Van Ingen, secretary of the American Child Health Association.

Hospital News.—The visiting committee of the state charities aid association, March 17, made a report condemning the observation ward at Bellevue Hospital as entirely "nonfireproof."——The Junior League of the Hospital for Joint Diseases has endowed a $5,000 bed in that hospital.——A delegation of physicians from Coney Island visited the mayor, March 31, to protest against the crowded conditions in the Coney Island Hospital. There are only 100 beds. The old hospital was built sixteen years ago for a Coney Island population of about 9,000, whereas the population today is about 200,000.——Crowded conditions are also said to prevail at the Kings County Hospital, Brooklyn, the largest general hospital in the borough, and new buildings have been requested which would cost more than $2,000,000.——Ground was broken, April 2, for the $500,000 Emergency Building at Knickerbocker Hospital, One Hundred and Thirty-First Street and Convent Avenue, only half of which sum has been raised to date, the campaign for funds being in progress.——Fifteen thousand dollars to endow a memorial room in the new Presbyterian Hospital was voted, April 4, at a meeting of the emergency canteen of the American Red Cross Club. It was urged that the memorial room be devoted to the care of mentally disabled war veterans.——The annual banquet of the Peoples Hospital was given by the board of directors and medical staff at the Hotel Biltmore, April 18.

NORTH CAROLINA

Lecture on Evolution Omitted.—An aftermath of the "evolution agitation" in which a bill to forbid teaching evolution in the public schools was barely defeated after a fight in which the president of the state university championed academic freedom, is the denial by the university authorities of the recent statement in the press that the invitation to Dr. Wolfgang Koehler, exchange professor from the University of Berlin, to lecture on "The Anthropoid Ape" had not been extended by authority. Professor Murchison of Clark University, whom the press reports as having handled the correspondence, states that such invitations are usually mere formalities, and as a rule are extended by the authorities when requested. In this particular case, it is stated, one of the scientific fraternities at the University of North Carolina had asked Professor Koehler to come, and later the invitation was vetoed by the university authorities.

Hospital News.—The Parrott Memorial Hospital, Kinston, will erect an addition costing more than $75,000.——The new hospital building at Albemarle will soon be opened at a completed cost of $100,000, one half of which was raised by stock subscriptions, and one half subscribed by the general public and by physicians of the county. Officers have been selected as follows: president, Dr. Julius C. Hall; vice president, Dr. William T. Shaver, and secretary-treasurer, Dr. Lucius V. Dunlap.——Dr. Parran Jarboe has been elected president of the staff of St. Leo's Hospital, Greensboro; Dr. Ralph E. Dees, vice president, and Dr. Robert A. Herring, secretary.——The Mecklenburg County authorities have selected a site of 100 acres, twelve miles from Charlotte, on the Statesville highway, for its $100,000 tuberculosis sanatorium. Construction work will begin shortly.——The Secretary of State announces the incorporation of the "Babies Hospital, Incorporated, Wilmington, N. C., non-stock." A number of well known philanthropic women are the incorporators.——Construction work has been started on the new Davis Hospital, Statesville. It will be of four stories, with a capacity of fifty patients.

OHIO

Breast Milk Station.—The Maternity and Children's Hospital, Toledo, maintains a breast milk station which is at the service of any physician. Breast milk is bought and sold without profit. This station collected and dispensed from April 1, 1924, to Jan. 1, 1925, 11,282 ounces of mother's milk.

Marriage and Chiropractic Bills.—The recent legislature enacted a law making it compulsory for both parties of a marriage contract to present certificates to show that they are free from venereal disease.——The chiropractic bills, which aimed to create a separate board of examiners for members of that cult, did not pass the legislature.

State Medical Meeting.—The seventy-ninth annual meeting of the Ohio State Medical Association will be at Columbus, May 5-7, under the presidency of Dr. George E. Follansbee, Cleveland. Among visiting speakers will be Dr. Gotthelf Carl Huber, University of Michigan Medical School, Ann Arbor; George E. Vincent, Ph.D., president, Rockefeller Foundation, New York; Dr. Olin West, General Manager and Secretary, American Medical Association, and Dr. William L. Benedict, Rochester, Minn. Registration will be conducted in Memorial Hall, East Broad Street, between Fifth and Sixth streets. The fifth annual golf tournament will be played, May 4, at the Columbus Country Club, and the usual organization luncheon will be, May 6, at the Elks' Club.

Academy of Medicine of Toledo.—Dr. James T. Case, Battle Creek, Mich., addressed the Academy of Medicine of Toledo and Lucas County, April 3, on "Small Intestinal Obstruction, Acute and Chronic—a Radiologic-Surgical Study." Dr. Henry F. Helmholz, Rochester, Minn., will address the May general meeting on "The Diagnosis and Treatment of the Various Forms of Pyelitis."——The trustees of the academy have set aside three rooms on the first floor of its building as the beginning of a library. It is planned to permit the library to grow along lines found most necessary instead of starting a fully developed library at once. The trustees are ready to meet the needs of members as far as possible with the resources available. Dr. Robert C. Longfellow recently contributed 150 volumes to the library.——Mr. William J. Burns, the newly appointed executive secretary of the academy, has taken up his duties. The academy building has been entirely redecorated. Mr. Burns will be in his office daily, and will also be managing editor of the *Bulletin*.

OKLAHOMA

Society News.—The president of the Oklahoma County Medical Association is now editor of the association's *Medical Bulletin*, succeeding Dr. William H. Bailey, resigned.——Dr. John F. Kuhn has been appointed professor of gynecology at the University of Oklahoma School of Medicine, to succeed the late Dr. John S. Hartford.——Dr. William H. Bailey addressed the Beckham County Medical Society at Sayre recently on "Blood Examination."

OREGON

Personal.—Dr. Elijah B. Pickel, Medford, has been appointed a member of the state board of health to succeed Dr. George E. Houck, Roseburg. Drs. Charles J. Smith, Portland, and John H. Rosenburg, Primeville, have been reappointed members of the board.——Emma A. Winslow, Ph.D., has come to Salem to assist Dr. Walter H. Brown with the Marion County Child Health Demonstration. Dr. Winslow formerly was on the staff of Columbia University, New York.——Drs. Charles Billington and Herbert C. Eastland, Reedsport, have been appointed to the staff of the new Wesley Hospital at Marshfield.

The Last Legislature.—Senate bills 105 and 198, passed by the last legislature, became laws. They concern public health, the former prohibiting sewage disposal into streams that flow less than 5 cubic feet a second, the latter placing cosmetic therapy operators under the jurisdiction of the state board of health. Both bills were endorsed by the medical profession. House bill 385, requiring employees of the industries and stores having to do with the production, preparation, manufacture, packing, storage and sale or distribution of food, to submit to a physical examination semiannually was withdrawn. This bill was endorsed by the Public Health League and the state board of health, but was vigorously opposed by the industries. The Oregon Public Health League was able to secure passage of practically all bills it endorsed, while measures opposed were on the whole defeated.

PENNSYLVANIA

The Tenth Mellon Lecture.—The Society for Biologic Research of the School of Medicine, University of Pittsburgh, announces that Dr. Frank B. Mallory, Boston, will give the Tenth Mellon Lecture in Carnegie Lecture Hall, April 30, on "Hemochromatosis and Chronic Poisoning with Copper." Members of the Allegheny County Medical Society are invited.

Diamond Jubilee.—The board of trustees of the Medical Society of the State of Pennsylvania will entertain at luncheon, on the opening day of the "Diamond Jubilee," the President of the American Medical Association and the official delegates from the medical societies of the states of New York, New Jersey, Ohio and West Virginia and the District of Columbia, who have already been appointed.

Personal.—Dr. Philip Horowitz addressed the Dauphin County Medical Society, Harrisburg, April 7, on "The Present

Concept of the Use of Insulin in the Treatment of Diabetes."——Dr. George A. Ricketts, Osceola Mills, and Dr. Evan L. Jones, Philipsburg, were recently elected to the medical staff of the Philipsburg Hospital.——Dr. Calvin M. Wilson, Franklin, has been reappointed for the twentieth time as division surgeon of the New York Central Railroad.

Fifty Millions for the State's Unfortunates.—A resolution to amend the constitution, authorizing the state to issue bonds not to exceed $50,000,000 to finance construction for state-owned institutions for the feebleminded, epileptic and insane, penal offenders and delinquents has been introduced in the senate by Hon. Marshall L. Phipps of Franklin, and in the house by Hon. Philip Sterling of Philadelphia. If passed by this legislature, such a resolution must be passed again in 1927 and subsequently be ratified by popular vote.

Society News.—The Pittsburgh Academy of Medicine, April 7, gave a symposium on cataract by Drs. Edward A. Weisser, Stanley S. Smith and William C. Meanor.——Dr. Alfred F. Hess, New York, gave an illustrated postgraduate lecture before the Allegheny County Medical Society, Pittsburgh, April 16, on "Newer Aspects of the Action of Ultraviolet Rays in Relation to Rickets."——The regular scientific meeting of the Allegheny County Medical Society, April 21, will be a symposium on headache.——Dr. Daniel J. McCarthy, professor of medical jurisprudence, University of Pennsylvania, addressed the Lycoming County Medical Society at the April meeting on "Functional Nervous Diseases." Dr. William H. Schmidt, in accordance with the newly established program, was tendered a testimonial following the March meeting of the Lycoming County Medical Society.——Dr. John D. Donnelly, Harrisburg, addressed the Cambria County Medical Society, March 12, at Johnstown, on "The Dick Test and Scarlet Fever Immunization."——Dr. Cornelius C. Laffer, Meadville, for the last thirty years secretary of the Crawford County Medical Society, has resigned and has been succeeded by Dr. John W. Hazen, Meadville.

Philadelphia

Sight Saving Classes.—To give partial sighted children a fundamental education, Philadelphia established, in 1920, conservation of vision classes. Candidates were examined by an oculist, and children having less than 20/70 vision with proper refraction in the best eye were referred to sight saving classes, and those having less than 20/200 vision in the best eye with proper refraction were referred to blind institutions. In all, 272 pupils have been recommended to the sight saving classes by the eye clinic of the department of health. It has been found that the most common causes of loss of vision by children in these classes are progressive myopia and corneal opacities.

Society News.—Dr. Clifton M. Miller, Richmond, Va., addressed the Philadelphia Laryngological Society, April 7, on "Optic Neuropathy and Spheno-Ethmoid Disease."——Dr. Eugene L. Opie addressed the Jefferson Medical College Society of Pathologic Anatomy, April 14, on "The Tuberculosis of Healthy Individuals and Its Significance," illustrated by lantern slides.——Efforts to limit the membership of the Medical Club of Philadelphia failed when the question was proposed at the recent annual meeting. By a proposed amendment to the constitution, the membership would have been limited to 1,450. The present membership approximates 1,400. Dr. Charles W. Burr was elected president of the club.

Smallpox in Philadelphia.—The discovery of four more cases of smallpox by physicians of the bureau of health, April 5, brings the total number of smallpox cases this year to ninety-two, affecting thirty wards. Dr. Andrew A. Cairns, chief of the health bureau, said, it is reported, that smallpox is well implanted in all parts of Phliadelphia, but it cannot be said the contagion has reached the proportion of an epidemic. All the cases discovered have been among foreign-born and colored persons. April 7, the Philadelphia General Hospital was closed to visitors, when a woman patient was found to be suffering with smallpox in an advanced stage. The patient was admitted to the hospital, March 26, for treatment for another disease.

Personal.—Dr. Merritte W. Ireland, Surgeon General, United States Army, will be the principal speaker at a dinner concluding the celebration of the one hundredth anniversary of the founding of Jefferson Medical College. General Ireland graduated from Jefferson in 1891. The celebration will occur, May 29, immediately following the sessions of the American Medical Association at Atlantic City.——Dr. Kenneth D. Blackfan, Harvard University Medical School, Boston, delivered the Frederick A. Packard annual lecture, before the Philadelphia Pediatric Society, April 14, on "Some Aspects of Nephritis."——Dr. John W. Croskey, ophthalmic surgeon at the Philadelphia General Hospital since 1901, has resigned, it is reported, in order to devote more time to private practice.

RHODE ISLAND

Providence Medical Association.—At the recent annual meeting of this association, Providence, Dr. Albert H. Miller was elected president; Dr. Roland Hammond, vice president; Dr. Peter P. Chase, secretary, and Dr. Charles F. Deacon, treasurer. The association voted to make an appropriation to the Rhode Island Medical Society of $175 for the purchase of magazines; $450 for the use of the building, and $300 for the binding of magazines, this sum to include the unexpended balance from the amount appropriated last year. At the regular March meeting of the association, Dr. Louis I. Kramer spoke on "Congenital Myxedema," and Dr. Guy W. Wells on the treatment of some phases of thyroid disease.

SOUTH CAROLINA

A Chiropractor and Corn Whisky.—E. C. Jarrett, Spartanburg, a chiropractor, was recently arrested on a charge of violating the Volstead Act and sentenced to pay $100, or serve thirty days in jail. The police found in Jarrett's car more than a gallon of corn whisky.

SOUTH DAKOTA

Health Officer Appointed.—It was announced, April 3, by Dr. William F. Keller of the board of health, that Dr. Albert E. Campbell of Los Angeles had been appointed city health officer of Sioux Falls to succeed Dr. William M. Barnes, who recently resigned.

TENNESSEE

Rockefeller Gives to Nurses' School.—One hundred thousand dollars has been donated by the Rockefeller Foundation to the Medical Department of Vanderbilt University, Nashville, to be used over a period of five years for the development of the school of nursing that has been established in the medical department.

Dr. Terry Accepts Toledo Appointment.—Dr. Benjamin T. Terry, for six years professor of pathology, Vanderbilt University School of Medicine, Nashville, has been appointed director of pathologic laboratories at the Toledo Hospital, Toledo, Ohio, effective September 1. Dr. Terry is a graduate of Johns Hopkins University. He was formerly a member of the staff of the Rockefeller Institute and director of laboratories at Kings County Hospital, Brooklyn.

WASHINGTON

Personal.—Dr. Harry V. Wurdemann, Seattle, colonel, Officer's Reserve Corps, U. S. Army, has been assigned to duty with the general staff, Washington, D. C., for the period from March 11 to April 20.

WEST VIRGINIA

Senate Votes to License Chiropractors.—The state senate, April 2, voted 18 to 9 on the bill which would license chiropractors in this state, and sent the bill to the lower house.

Physician Indicted.—Two indictments were returned, March 2, it is reported, against Dr. William S. Bebout, Wheeling, charging him with performing an illegal operation on a girl, aged 24, of Clarksburg, who died; and on a girl, aged 23, of Wheeling.

PHILIPPINE ISLANDS

Chiropractic Illegal in the Islands.—The supreme court delivered a serious, if not fatal, blow, March 2, to chiropractors in the Islands when that tribunal ruled that the practice of chiropractic without the approval of the board of medical examiners is illegal. The opinion of the court was written by Justice Ostrand with but one dissenting vote, that of Justice Romualdez. The court's decision confirmed the judgment in two cases of the court of first instance in Manila which convicted Jovita Buenviaje and Victorio M. Alcantara, Manila chiropractors, of violation of the medical

practice act. The chiropractors some time previously conferred on Justice Romualdez' brother, the mayor of Manila, the honorary degree of doctor of chiropractic.

CANADA

British Columbia Society News.—Dr. James L. Turnbull addressed the Vancouver Medical Association, Vancouver, April 7, on "Differential Diagnosis of Acute Abdominal Conditions." At a special meeting of this association, March 25, Dr. Charlton E. Hagyard, Seattle, spoke on "Chronic Nonspecific Colitis."——At a meeting of the Fraser Valley Medical Society, New Westminster, Dr. David A. Clark spoke on "The Dick Test and Scarlet Fever," and Drs. Bruce W. Cannon and George W. Sinclair, both of New Westminster, on "Anatomy, Physiology and Surgery of the Pancreas." At another recent meeting of this society, Dr. Herbert B. MacEwen, Kelowna, spoke on "Insulin," and Dr. William A. Robertson, New Westminster, on "Fractures About Joints."

GENERAL

Personal.—Dr. Samuel Taylor Darling of the Rockefeller Foundation and member of the Faculty of Medicine of São Paulo University was elected a corresponding member of the Malaria Commission of the League of Nations, at Geneva, March 30.

New Domestic Journal.—The *Medical Searchlight*, edited by Dr. Samuel H. Brown, Philadelphia, published its first number in April. It is to be a semimonthly bulletin of medical organizations of Philadelphia, eastern Pennsylvania, New Jersey and Delaware.

Warning.—During March, a man, aged 45, 6 feet tall, weighing 175 pounds, with gray hair and florid complexion, succeeded in securing funds from physicians in Plant City, Fla., by requesting endorsements of drafts on the Sheehy Mercantile Agency, which he claimed to represent. The firm writes that the man is not their representative and disclaims any responsibility.

Pharmacy Day.—All branches of the drug trade in every state will observe April 17 as All-Pharmacy Day, when it is planned to complete a $1,000,000 building fund for a permanent headquarters in some city to be selected at the annual conference in Des Moines, Iowa, in August. Nearly $700,000 has been raised solely by subscription within the industry, the American Pharmaceutical Association announced. H. A. B. Dunning, Baltimore, is chairman of the general committee.

Warning Against Unauthorized Solicitors.—John T. Alger and Roy Moss are fraudulently soliciting subscriptions for American Medical Association publications. They were in Jackson, Miss., January 5, and later passed through Bogalusa, La., evidently heading for New Orleans. Alger is 29 years old. Moss claims to be an ex-service man and usually works in a uniform. It is understood that his right arm is amputated. These men are not authorized to represent the American Medical Association publications and any physician who is approached by either of them is urged to notify the *Hygeia* department of the American Medical Association.

International Birth Control Committee.—At the final session of the Sixth International Neo-Malthusian and Birth Control Conference, March 31, an international birth control committee was appointed with the following members: England, Drs. Drysdale and Norman Haire; Scandinavia, Mrs. Thit Jensen; Austria, Dr. and Mrs. Johann Ferch; Hungary, Mme. Rosika Schwimmer; Holland, Dr. Aletta Jacobs; Germany, Dr. Ferdinand Goldstein and Mme. Helen Stocker; Japan, H. Takarada; China, Durham Chen; Mexico, Roberto Haberman; France, G. Hardy and G. de La Pouge; Switzerland, Prof. Gertrude Wohen, and United States, Mrs. Margaret Sanger, Dr. Cooper, Toscan Bennett and Mrs. Kennedy. The next international birth control conference will be held in Geneva in August, immediately before the assembly of the League of Nations.

American Chemical Society Meeting.—At the meeting of the American Chemical Society, Baltimore, April 6-10, the council voted to hold the spring meeting of 1926 at Tulsa, Okla., the fall meeting of 1926 at Philadelphia, and the spring meeting of 1927 at Richmond, Va., and decided not to authorize printing a second decennial index to Chemical Abstracts until subscriptions are sufficient to guarantee $90,000, the estimated cost of 4,000 copies. Among the work reported dealing with chemotherapeutics, that of A. F. Hess and his associates was especially interesting. They have found that the necessary ingredient in oils which may be irradiated with ultraviolet rays lies in the nonsaponifiable portion and consists essentially of cholesterol. About 2,000 members of the society were guests of the Army at Aberdeen Proving Grounds, witnessing the testing of shells, powder, tanks, aeroplanes and smoke screens.

LATIN AMERICA

Personal.—Our Buenos Aires exchanges mention that Dr. F. W. Schultz, professor of pediatrics, University of Minnesota Graduate School of Medicine, Minneapolis, was guest of honor at a luncheon there, March 1, and visited the hospitals and other institutions for children.——Dr. M. C. Aljovín has been elected president of the Círculo Médico Peruano, and Drs. R. Palma and H. F. Delgado, secretary, and director of the official organ.

FOREIGN

Mademoiselle Curie.—The daughter of Madam Curie, Mlle. Irene Curie, who recently read a thesis in the Sorbonne to obtain the degree of doctor of sciences, received her degree, April 1. Her subject was "Research on the Alpha Rays of Polonium: Oscillations of the Trajection Initial Velocity and Ionizing Effects."

New Journal.—Dr. Rhoda Erdmann, professor of zoology and experimental research on cells, University of Berlin, has founded a journal devoted to the cultivation of tissues outside of the organism. The publisher is Gustav Fischer of Jena. Articles can be published in German, English, French or Italian. The journal will be published irregularly, as material accumulates. Original articles offered for publication should be sent to Professor Erdmann, Berlin-Wilmersdorf, Nassauische Strasse 17.

Prizes Offered by Belgian Academy. — The national Académie de médecine at Brussels has seven prizes open to international competition. The topics announced for this year are research on the Purkinje fibers in the heart; on the mineral colloids used in pharmacy; on the clinical value of basal metabolism; on biologic purification of sewage; on pathogenesis and treatment of nervous diseases, especially epilepsy, and on asthma. The prizes range from 1,000 to 5,000 francs, and articles must be presented in French or Latin.

Polish Antituberculosis Congress.—The First Polish Antituberculosis Congress will open in Krakow, May 16, and the Fourth Congress of Polish Physicians and Sanitary Officials, May 18-19. The principal subjects for discussion are: "The Clinical Classification of Tuberculosis"; "The Specific and Surgical Treatment of Tuberculosis"; "Treatment by Artificial Pneumothorax"; "The Importance of Dispensaries in the Campaign Against Tuberculosis," and the "Climatological and Sanatorium Treatment of Tuberculosis." The subjects of the Fourth Sanitary Congress will be "School Hygiene," "Infant Mortality" and "The Protection of Mother and Child from the Standpoint of Sanitation."

Government Services

Navy Reserves Entitled to Medical Treatment

Members of the U. S. Naval Reserve Force are entitled to medical and hospital treatment at the expense of the government, when on active duty, even though it is necessary to have such medical service performed by civilian physicians and hospitals. This decision was made by the Comptroller General, March 19. The Comptroller General states that under the Act of July 1, 1918, members of the Naval Reserve Force, when employed on active service, are subject "to the laws, regulations and orders for the government of the regular navy" and are entitled to receive "the same pay and allowances" as received by officers and enlisted men of the regular navy. He directs attention to Section 1586 of the revised statutes which precludes the reimbursement of expenses incurred for medical or hospital treatment of an officer of the navy by a civilian, unless such expenses "were incurred when he was on duty and the medicines could not have been obtained from naval supplies or the attendance of a naval medical officer could not have been had." This decision will terminate any legal doubt as to the validity of payments for medical and hospital attention to members of the Naval Reserve Force injured while on active duty.

THE ATLANTIC CITY SESSION

AMERICAN MEDICAL ASSOCIATION, SEVENTY-SIXTH ANNUAL SESSION ATLANTIC CITY, MAY 25-29, 1925

OFFICIAL CALL

TO THE OFFICERS, FELLOWS AND MEMBERS OF THE AMERICAN MEDICAL ASSOCIATION

The seventy-sixth annual session of the American Medical Association will be held in Atlantic City, May 25-29, 1925.

The House of Delegates will convene at 10 a. m., Monday, May 25. In the House the representation of the various constituent associations for 1925 is as follows:

Alabama	2	New Hampshire	1
Arizona	1	New Jersey	3
Arkansas	2	New Mexico	1
California	5	New York	11
Colorado	2	North Carolina	2
Connecticut	2	North Dakota	1
Delaware	1	Ohio	6
District of Columbia	1	Oklahoma	2
Florida	1	Oregon	1
Georgia	2	Pennsylvania	8
Idaho	1	Rhode Island	1
Illinois	8	South Carolina	1
Indiana	3	South Dakota	1
Iowa	3	Tennessee	2
Kansas	2	Texas	4
Kentucky	3	Utah	1
Louisiana	2	Vermont	1
Maine	1	Virginia	2
Maryland	2	Washington	2
Massachusetts	5	West Virginia	2
Michigan	4	Wisconsin	3
Minnesota	3	Wyoming	1
Mississippi	2	Alaska	1
Missouri	4	Canal Zone	1
Montana	1	Hawaii	1
Nebraska	2	Philippine Islands	1
Nevada	1	Porto Rico	1

The fifteen scientific sections of the American Medical Association, the Medical Department of the Army, the Medical Corps of the Navy and the Public Health Service are entitled to one delegate each.

The Scientific Assembly of the Association will open with the general meeting to be held at 8:30 p. m., Tuesday, May 26. The sections will meet Wednesday, Thursday and Friday, May 27, 28 and 29, as follows:

CONVENING AT 9 A. M., THE SECTIONS ON

Practice of Medicine.
Obstetrics, Gynecology and Abdominal Surgery.
Laryngology, Otology and Rhinology.
Pathology and Physiology.
Stomatology.
Urology.
Orthopedic Surgery.
Preventive and Industrial Medicine and Public Health.

CONVENING AT 2 P. M., THE SECTIONS ON

Surgery, General and Abdominal.
Ophthalmology.
Diseases of Children.
Pharmacology and Therapeutics.
Nervous and Mental Diseases.
Dermatology and Syphilology.
Gastro-Enterology and Proctology.
Miscellaneous Topics — Meetings on Radiology.

The Registration Department will be open from 8:30 a. m. until 5:30 p. m., Monday, Tuesday, Wednesday and Thursday, May 25, 26, 27 and 28, and from 8:30 a. m. to 12 noon, Friday, May 29.

WILLIAM ALLEN PUSEY, President.

FREDERICK C. WARNSHUIS, Speaker, House of Delegates.
OLIN WEST, Secretary.

MEMBERS OF THE HOUSE OF DELEGATES

A Preliminary Roster of the Legislative Body of the American Medical Association

The list of members of the House of Delegates for the session is incomplete, as a number of the state associations are yet to hold their meetings at which delegates will be elected. The following is a list of the holdover delegates and of the newly elected members (indicated by *) who have been reported to THE JOURNAL in time to be included:

STATE DELEGATES

ALABAMA
S. W. Welch, Montgomery.
*A. A. Walker, Birmingham.

ARIZONA

ARKANSAS
William T. Wootton, Hot Springs National Park.

CALIFORNIA
Hans Lisser, San Francisco.
Victor G. Vecki, San Francisco.
*Albert Soiland, Los Angeles.
*Robert V. Day, Los Angeles.
*Lemuel P. Adams, Oakland.

COLORADO
L. H. McKinnie, Colorado Springs.
*C. N. Meader, Denver.

CONNECTICUT
John Edward Lane, New Haven.
*Walter Ralph Steiner, Hartford.

DELAWARE
*W. O. LaMotte, Wilmington.

DISTRICT OF COLUMBIA
William Gerry Morgan, Washington.

FLORIDA
H. Marshall Taylor, Jacksonville.

GEORGIA
Allen H. Bunce, Atlanta.

IDAHO
C. M. Cline, Idaho Falls.

ILLINOIS
T. O. Freeman, Mattoon.
E. P. Sloan, Bloomington.
C. J. Whalen, Chicago.
J. S. Nagel, Chicago.

INDIANA
George F. Keiper, Lafayette.
Albert E. Bulson, Jr., Fort Wayne.
*J. Rilus Eastman, Indianapolis.

IOWA
Donald Macrae, Jr., Council Bluffs.
Bert L. Eiker, Leon.

KANSAS
E. D. Ebright, Wichita.

KENTUCKY
Irvin Abell, Louisville.
*F. A. Stine, Newport.
*A. T. McCormack, Louisville.

LOUISIANA
S. M. Blackshear, New Orleans.

MAINE
Bertram L. Bryant, Bangor.

MARYLAND
Charles O'Donovan, Baltimore.
*Thomas S. Cullen, Baltimore.

MASSACHUSETTS
F. B. Lund, Boston.
E. F. Cody, New Bedford.
*H. G. Stetson, Greenfield.
*C. E. Mongan, Somerville.
*J. F. Burnham, Lawrence.

MICHIGAN
*A. W. Hornbogen, Marquette.
*J. D. Brook, Grandville.
*George E. Frothingham, Detroit.
*Frederick C. Warnshuis, Grand Rapids.

MINNESOTA
J. C. Litzenberg, Minneapolis.
*J. L. Rothrock, St. Paul.
*T. L. Chapman, Duluth.

MISSISSIPPI
Henry Boswell, Sanatorium.

MISSOURI
G. Wilse Robinson, Kansas City.
W. J. Ferguson, Sedalia.

MONTANA
C. T. Pigot, Roundup.

NEBRASKA
A. D. Dunn, Omaha.
*R. W. Fouts, Omaha.

NEVADA
*C. E. Piersall, Reno.

NEW HAMPSHIRE
D. E. Sullivan, Concord.

NEW JERSEY
David C. English, New Brunswick (deceased).
Henry B. Costill, Trenton.
*Wells P. Eagleton, Newark.

NEW MEXICO

NEW YORK
E. Eliot Harris, New York.
Thomas Clark Chalmers, Forest Hills.
Arthur Joseph Bedell, Albany.
Orrin Sage Wightman, New York.
Edward Livingston Hunt, New York.
J. Richard Kevin, Brooklyn.

NORTH CAROLINA
M. L. Stevens, Asheville.

NORTH DAKOTA
*E. A. Pray, Valley City.

OHIO
Wells Teachnor, Sr., Columbus.
Ben R. McClellan, Xenia.
George Edward Follansbee, Cleveland.

OKLAHOMA
McLain Rogers, Clinton.

OREGON

PENNSYLVANIA
C. C. Cracraft, Claysville.
J. Newton Hunsberger, Norristown.

William H. Mayer, Pittsburgh.
John A. Campbell, Williamsport.
Arthur E. Crow, Uniontown.
*Walter F. Donaldson, Pittsburgh.
*Henry D. Jump, Philadelphia.
*Samuel P. Mengel, Wilkes-Barre.

RHODE ISLAND
Roland Hammond, Providence.

SOUTH CAROLINA

SOUTH DAKOTA
G. G. Cottam, Sioux Falls.

TENNESSEE
Jere L. Crook, Jackson.

TEXAS
J. W. Burns, Cuero.
A. C. Scott, Temple.

UTAH
*E. M. Neher, Salt Lake City.

VERMONT
*William G. Ricker, St. Johnsbury.

VIRGINIA
J. Allison Hodges, Richmond.
Southgate Leigh, Norfolk.

WASHINGTON
Frederick Epplen, Spokane.
*D. E. McGillivray, Port Angeles.

WEST VIRGINIA
H. P. Linsz, Wheeling.
*James R. Bloss, Huntington.

WISCONSIN
Joseph F. Smith, Wausau.
*Rock Sleyster, Wauwatosa.
*H. M. Brown, Milwaukee.

WYOMING
George P. Johnston, Cheyenne.

ALASKA

HAWAII

ISTHMIAN CANAL ZONE

PHILIPPINE ISLANDS

PORTO RICO
*Jorge del Toro, San Juan.

GOVERNMENT SERVICES
United States Army, George C. Dunham.
United States Navy, George T. Smith.
United States Public Health Service, J. W. Kerr.

DELEGATES FROM THE SECTIONS

PRACTICE OF MEDICINE
Walter L. Bierring, Des Moines.

SURGERY, GENERAL AND ABDOMINAL
Carl B. Davis, Chicago.

OBSTETRICS, GYNECOLOGY AND ABDOMINAL SURGERY
George Gray Ward, New York.

OPHTHALMOLOGY
Cassius D. Wescott, Chicago.

LARYNGOLOGY, OTOLOGY AND RHINOLOGY
Burt R. Shurly, Detroit.

DISEASES OF CHILDREN
I. A. Abt, Chicago.

PHARMACOLOGY AND THERAPEUTICS
Cary Eggleston, New York.

PATHOLOGY AND PHYSIOLOGY
David J. Davis, Chicago.

STOMATOLOGY
George V. I. Brown, Milwaukee.

NERVOUS AND MENTAL DISEASES
Tom B. Throckmorton, Des Moines.

DERMATOLOGY AND SYPHILOLOGY
Howard Fox, New York.

PREVENTIVE AND INDUSTRIAL MEDICINE AND PUBLIC HEALTH
W. S. Leathers, University, Miss.

UROLOGY
William F. Braasch, Rochester, Minn.

ORTHOPEDIC SURGERY
H. Winnett Orr, Lincoln, Neb.

GASTRO-ENTEROLOGY AND PROCTOLOGY
George B. Evans, Dayton, Ohio.

AT ATLANTIC CITY—1925

The Playground of the World

Juan Ponce de Leon, Spanish explorer of the sixteenth century, sought in vain for the spring whose virtues, it was credulously believed, would restore the vigor of youth to the aged. Searching for this fountain of youth, he landed on the coast of Florida on Palm Sunday (March 27) in the year of 1512. There he found springs innumerable, each of which today asserts itself as the claimant to the high antiquity of being the specific spring in which the great Spaniard performed his ablutions. History informs us, however, that nowhere could he find the mythical fountain that embodied the attributes that restored perpetual youth. Who will deny that had he extended is search northward his fondest hopes might have been realized? Had he landed, for instance, on Absecon Island where—quoting the lines of the late Col. William E. Potter of Bridgeton:

Where the long surges heave and break,
Foaming upon the glittering shore,
And laughing maidens often take
A "header" 'midst the breakers' roar;
Where zephyrs gently woo the toiler,
And nights are mild and skies are clear,
And on the housewife's kitchen broiler
The soft-shell crab doth oft appear;
Where hops abound and bugles blare,
And Roman nobles, in the busy street,
Incognito, with monkeys fare,
Grinding their daily music sweet;
Where agile oysters, mild, serene,
On beds of moss recline, and lobsters wise
Live pinchingly; and pearly sheen
Of hake and flounder wins the flies;
Where, by the heaving sea; the faker's booth
Is found ere yet the summer's gone—
Pours forth the fountain of eternal youth,
The spring of ancient Ponce de Leon.
The old Castilian left his home,
The vine-clad hills of distant Spain,
A thousand leagues of sea to roam;
To brave the heat, the cold, the pain
Of wounds, the fatal poisoned dart,
The march through swamp and tangled wood,
The ambush dark, the fear, the start
Of keen surprise when the wild Indian stood,
Stern, painted, cruel, before him,
But undismayed by wounds or death,
His loved lost youth to restore him,
Aged weak and worn, with failing breath,
He searched, without the glorious sight
Of the famed spring, now flowing free,
Pure and wholesome, sparkling and bright,
In our gay City by the Sea.

The old Castilian died long before the feet of white men trod the soil whereon Atlantic City was founded, but the wonderful life-giving atmosphere of this beach, if not the identical fountain of youth, was discovered by John Peter Brissot de Warville, a Frenchman, who visited this country after the Revolution. He told of the exceptional dryness of the atmosphere on Absecon Beach, having visited the island in September, 1788, to enjoy the excellent gunning and fishing.

In those Fellows of the American Medical Association who have availed themselves of the incomparable hospitality, and the warm reception that were everywhere evident at the several annual sessions held at Atlantic City in years past, the announcement concerning the forthcoming meetings in this famous seaside city will arouse many happy reminiscences.

Although people of the United States are now scattered far and wide over countless square miles of country, occupying every portion of the territory lying between two great oceans thousands of miles apart, they still maintain an inherent love for the old ocean. The seaside resorts are now as much a necessity to inhabitants of the interior as to those living in the states bordering on the Atlantic Ocean. Year after year there are pilgrimages to the ocean from every inland section, Atlantic City entertaining 10,000,000 visitors annually.

The Atlantic City beach has become celebrated as the finest on the coast of the United States. The surf, pouring inward from the expanse of a great ocean, washes a beach of the clearest sands, which glitter in the summer sun's rays and send back myriad flashing streams of water which never cease thus to advance and retreat. The endless panorama of life on water, the strand and boardwalk, constantly in motion and ever changing; the white winged vessels or the rolling porpoise enlivening the outlook—all these and many other attractions are found at Atlantic City, to say nothing of the mild and healthful climate of winter, the cool, invigorating breezes in summer, and the proximity which renders its location within such easy reach that its denizens may within a few hours find themselves in many of our great cities.

CLIMATE

Concerning the climate of Atlantic City, much could be written and the resultant description not embody half its delightfulness and helpfulness. Here, the disquieted mind and the harassed body become infused with an air of languor, a consciousness of tranquillity from the matchless tonic of sunshine and sea. The air is dry, and the barometric and thermometric readings are remarkably regular, there being little variation in atmospheric pressure or temperature. This is due to freedom from the influence of large bodies of fresh water. The causes that contribute to this delightful climate

are several: No large body of fresh water is near, so that chilling of the air in winter or saturating it with fresh vapor in summer does not occur. The air being dry itself, ever ready to take up moisture, evaporation takes place readily from the human body, keeping it cool. The southern exposure that the city enjoys is another cause for the mildness of the climate. The ocean breezes from the southeast, south and southwest blow directly from the Gulf Stream, and the Gulf Stream is of itself one of the most potent factors in the climate. The prevailing winds during the summer are delightfully cool and refreshing, and do not permit the temperature to rise too high.

The north and northwest winds are likewise dry, passing for miles over an inland pine belt and thus losing much of their moisture. Foggy days are rare; fogs follow water lines, as river or coast; and Atlantic City, being out in the ocean beyond the general coast line of New Jersey, escapes fogs that are frequently seen elsewhere. Here one may enjoy all the advantages of an ocean voyage with none of its discomforts. It is advisable to bring light outer wraps, as the evenings are comfortably cooling.

BOARDWALK

Skirting the ocean for a distance of nearly ten miles from the Inlet to Longport is a magnificent boardwalk with steel girders and columns twelve feet in height and sixty feet wide near the large hotels. The boardwalk of Atlantic City was originated in 1870, $5,000 being raised for that purpose. This walk was eight feet wide and was completed that year.

In the years that followed, many changes were wrought in the further maintenance and construction of this now famous promenade. At present, Atlantic City's boardwalk is one of the distinctive features of the resort commonly known in these days as the Playground of the World. During all seasons of the year it presents a scene of gaiety, a kaleidoscopic picture unequaled anywhere else in the world. The parts of the boardwalk devoted to those who promenade and to those who prefer to use rolling chairs have been so arranged in construction that at all times they enjoy a maximum amount of comfort. To many, a walk on the justly famous boardwalk is in itself the greatest recreation and diversion.

None of the other famous fashionable rialtos of the world provide the vivacity and sprightliness that fill and charm the eye as one views the smartly attired boardwalk throngs. Atlantic City is always in holiday attire. Here life sparkles and scintillates like the many facets of a finely cut diamond. Inseparably associated with the life of the boardwalk, the wheel chairs permit one to relax completely and to enjoy thoroughly the pleasing prospect of passing throngs, quaint gift shops, and a restful but ever changing sea. Rivaling Broadway at night, the boardwalk and great piers stretching seaward are outlined with myriads of lights, producing an effect that never fails to thrill.

ARRANGEMENTS FOR THE SESSION

The Atlantic County Medical Society, which has so ably played the part of host on several occasions in the past, is once more accepting the responsibility for the local arrangements, headed by its capable chairman, Dr. Clarence L. Andrews. A wealth of experience to assist the part, combined with the almost ideal convention facilities available in Atlantic City, provides sufficient basis for the prediction that this year's session of the American Medical Association on the Steel Pier will most certainly measure up to the high standard set by the Association in the past.

Although Atlantic City is in no sense new to the American Medical Association, previous sessions having been held here as early as 1900 and as recently as 1919, it is nevertheless true that changes are everywhere evident which will be immediately apparent. In addition to the present 1,200 hotels in Atlantic City, new hotels are being constructed, including one of 700 rooms and another of 500 rooms, and new additions of hundreds of rooms have been adjoined to the longer established hotels. This comprises one phase of an outstanding feature of a building program which has completely changed the contour of Atlantic City's skyline as viewed from the ocean.

BUSINESS IN ATLANTIC CITY

In the business section of the city this program has evidenced itself most forcibly through the erection of several imposing and handsome bank buildings, and a splendid new department store, which compares favorably with those in the large metropolitan centers.

THE STEEL PIER: HOUSING REGISTRATION BUREAU, MOVING PICTURE THEATER, THE EXHIBITS AND THE GENERAL SESSIONS

THE HIGH SCHOOL

A new high school, which embraces an expenditure of $2,000,000, has also been added to the city's fine educational equipment. It is of interest to know that the schools are free to the children of rented cottages or guests of the hotels.

This magnificent edifice is not only a center which disseminates its broad scope of learning to the younger generation, but also the center of cultural activities for the adult population. Here are given lectures by prominent authors, playwrights, scientists and leaders in various professions, all of international repute. Likewise, artists of equal prominence render recitals and concerts. These educational and intellectual features are sponsored and directed by the local board of education, and are open free to the public.

RESIDENTIAL SECTIONS

A cottage by the sea has furnished the basic theme for many poets and writers. It is doubtful whether any song or story has been inspired by such delightful surroundings as make the beautiful cottages of Atlantic City the ideal homes by the shore—a charming aspect in picturesque surroundings. These homes range from the small cottage to the palatial residence, harmonizing delightfully with the tranquil feeling

engendered by the dreamy cadence of the ocean swell, which pulses soothingly through the bracing air. Men of influence and position in the learned professions, in finance and in trade escape the clattering noises of the great metropolis, and not a few have established permanent residences in the soothing atmosphere of the City by the Sea. Infinite variety in the styles of architecture adds to the general effect and relieves drab uniformity. Fair and unequaled as she is, Atlantic City would lose a conspicuous part of her beauty were she bereft of this large residential section harboring these artistic homes.

STEEL PIER

The entire length of the Steel Pier will be devoted exclusively to the meetings and exhibits of the Association. This structure is splendidly adapted for convention purposes, both in its location and its interior arrangements. It is located directly on the Boardwalk, and is within a short distance of hotels ranging in size and elegance from the handsome ones facing the ocean to the many moderately priced but comfortable ones lining the adjacent avenues. The general meetings of the Association will be held in the music hall, which is at the outer end of the Pier, entirely removed from every distracting influence.

The Scientific and Commercial Exhibits will be found in the arcade through which one passes in going to or from the general meetings. The Registration Bureau and moving picture theater will be located in the Casino at the Boardwalk end of the Pier.

ABOVE: ATLANTIC CITY'S NEW TWO MILLION DOLLAR HIGH SCHOOL
BELOW: BUSINESS SECTION OF ATLANTIC AVENUE

ATLANTIC CITY HOTELS

Atlantic City is often referred to as a city of hotels. These hostelries are especially adapted to meet the most exacting requirements from the standpoint of comfort, elegance and price. Many of them are famous architecturally, and arise massively and majestically from the edge of the ocean, providing a fitting background for the colorful parade of Boardwalk saunterers, who constantly traverse this famous thoroughfare. Lacking in none of the essential comforts and conveniences, the more moderately priced hotels furnish accommodations of a superior excellence for the rates charged.

SIGHT-SEEING CONVEYANCES

Luxuriant and swiftly moving automobiles for sight-seeing are at all times at the command of visitors. Stated trips are made from one end of the island to the other, giving the visitor an opportunity to appreciate the broader scope of Atlantic City not commonly known to strangers. In addition to a modern and thriving business section, the observer will keenly enjoy the beauty and interesting developments in the residential division of the city. In addition, one may travel with speed and comfort to adjacent resorts.

GOLFING

Within easy access of Atlantic City are three excellent golf courses, which can be reached by automobile or trolley in less than half an hour. The Northfield Country Club comprises twenty-seven holes, with a playing length of 6,459 yards for the regular eighteen hole course.

The new Linwood Country Club consists of eighteen holes and a playing length of 6,575 yards.

The Seaview Club has eighteen holes, with a playing length of 6,400 yards. These golf courses are accessible for playing every month in the year. Arrangements for transportation to and from the golf courses are conveniently taken care of by the hotels.

INDOOR SWIMMING POOLS

For the lover of swimming when the ocean is not conducive for bathing in comfort, Atlantic City offers three large indoor swimming pools, so that the enthusiast may disport himself in the water at all times of the year. These swimming pools house many an aquatic contest, and have furnished our country with swimmers of superior skill, both men and women. These pools are kept under strict hygienic surveillance, filtered ocean water being used.

AVIATION

The aviation station is located at the Inlet, and periodic passenger trips are made up and down the beautiful beach. Curtiss seaplanes are used, under the operation of experienced aviators.

A PHYSICIAN'S PART IN THE DEVELOPMENT OF ATLANTIC CITY

It would be doing the medical profession an injustice, and slighting Atlantic City, if we did not narrate the powerful and constructive influence exerted by Dr. Jonathan Pitney. To quote, in part, from the greetings extended by Dr. Clarence Andrews to the Medical Society of New Jersey at its one hundred and fifty-seventh annual meeting: "The best evidence of just what part the medical man played in citing an early interest in the healthfulness of the Jersey coast can be given by referring to a paper published some time ago on 'Reminiscences of Atlantic County Physicians,' by Dr. Philip Marvel, Sr. Extracting from this paper, one finds that Gabriel Thomas in the seventeenth century, in writing about the early New Jersey colonies, said: 'Of doctors and lawyers, I shall say nothing, as this country is very peaceful and healthy.' Later on, Dr. John Gordon, writing to his brother in England, said: 'If you design to come hither, you may come as a planter or merchant; but as a doctor I cannot advise you, as I hear of no diseases to cure, but some agues and cut fingers, and legs.'"

Dr. Jonathan Pitney, formerly of Morris County, settled at Absecon in 1819, and made frequent trips to the seashore by conveyance, noticing the cleanliness of the sand dunes, the absence of mud puddles, and the purity of the air. He made this fact known, and subsequently the government lighthouse was built. This structure and landmark is in use, and at night, this beacon of marine safety throws its glare for some 16 miles seaward.

The immediate necessity of transportation facilities was impressed on this medical pioneer soon, with the resultant effect that an influential committee was formed, of which Dr. Pitney constituted one of the outstanding personalities, and it was through his efforts that the first system of railroad transportation bridged the stretch of 60 miles extending to Philadelphia, seventy-five years ago.

ATLANTIC CITY CALLS

Atlantic City bids the American Medical Association welcome. The choice of time for the annual session has been exceedingly fortunate, as late May brings delightful days along the seashore. Completely equipped is Atlantic City to supervise and operate the meetings. It is also true that no other city has so much to offer in the way of wholesome diversion and recreation to while away those hours not actually devoted to the business session of scientific meetings. These diversions include theaters, concerts by noted bands, yachting, fishing, golfing, tennis, aviation, horse-back riding, net-hauls and trap-shooting.

Atlantic City considers it a privilege and a pleasure to entertain this year's annual session of the American Medical Association, and it is the earnest intention of those in charge of the arrangements to exert every effort to render the occasion one that will bring back delightful recollections of profitable accomplishments.

TRANSPORTATION

Railroad Rates to Atlantic City

The passenger associations throughout the United States have authorized a rate of one and one-half fares for the benefit of members of the American Medical Association who will attend the Seventy-Sixth Annual Session to be held in Atlantic City, May 25-29. The Canadian Passenger Association has also authorized this reduced rate from points in Canada east of and including Armstrong, Fort William and Sault Ste. Marie.

RETURN CERTIFICATES NECESSARY

In order to secure the reduced fares, it will be necessary for each member to secure a certificate from the ticket agent when he purchases his ticket to Atlantic City. This certificate must be certified by the Secretary of the American Medical Association at the Registration Bureau on the Steel Pier in Atlantic City, and must then be validated by a representative of the railroads who will be on duty at the Registration Bureau. The certificate, when so certified and validated, will entitle its holder to a return ticket to his home at one-half fare.

It is important to remember that the certificate referred to above is not in the nature of a receipt for money paid for a ticket. *Be sure to ask your railroad ticket agent for a CERTIFICATE and not for a receipt.*

In the territories of the Trunk Line Association, the New England Passenger Association, the Central Passenger Association, the Southeastern Passenger Association, the Southwestern Passenger Association, and the Eastern Lines of the Canadian Passenger Association, the dates of sale of tickets to Atlantic City will be May 20-26, inclusive. In the Transcontinental and Western Passenger associations' territory the dates of sale of tickets to Atlantic City will be May 20-26 from Illinois, Iowa, Kansas, Manitoba, Minnesota, Missouri, Nebraska, northern Michigan, North Dakota, South Dakota, Wisconsin and from Julesburg, Colo., but will be May 19-25 from Colorado (except Julesburg), Montana, New Mexico, Utah and Wyoming, and will be May 18-24 from Arizona, British Columbia, California, Idaho, Nevada, Oregon and Washington.

CERTIFICATES NOT TO BE HONORED FOR LIMITED TRAINS

Certificates, *properly certified and validated,* will be honored for purchasing tickets for the return journey at one-half fare, up to and including June 2, *but these certificates will not be honored after that date.* Return tickets issued at the reduced fares will not be good on any limited train on which such reduced fare transportation is not honored. No refund of fare will be made on account of failure to obtain proper certificate when ticket to Atlantic City is purchased, nor on account of failure to present validated certificate when purchasing return ticket. The return ticket must be used over the same route as that traveled going to Atlantic City.

SUMMER EXCURSION RATES FROM THE FAR WEST

Summer excursion fares on a lower basis than the certificate plan fares will be in effect from Arizona, British Columbia, California, Idaho, Nevada, Oregon and Washington, May 22.

REGISTRATION

The Bureau of Registration will be located at the Boardwalk end of the Steel Pier, the first part of the building to be entered. Members of the Committee on Registration of the Local Committee of Arrangements will be on hand to assist those desiring to register. A branch postoffice in charge of government postoffice officials will be opened for the convenience of visitors, and an information bureau will be operated in connection with the Bureau of Registration.

Who May Register

Only Fellows, Affiliate, Associate and Honorary Fellows and Invited Guests may register and take part in the work of the sections. Fellows of the Scientific Assembly are those who have, on the prescribed form, applied for Fellowship, subscribed to THE JOURNAL, and paid their Fellowship dues for the current year. The annual Fellowship dues provide a subscription to THE JOURNAL for one year. Fellowship cards are sent to all Fellows after payment of annual dues, and these cards should be presented at the registration window. Any who have not received cards for 1924 should secure them at once by writing to the American Medical Association, 535 North Dearborn Street, Chicago.

Members in Good Standing Eligible to Fellowship

Members in good standing in county medical societies are members of state associations and of the American Medical Association. All members in good standing are eligible for Fellowship in the Scientific Assembly, and may qualify as Fellows after reaching Atlantic City; but it will be far better to qualify before leaving home in order that pocket cards may be secured and brought to Atlantic City so that registration can be more easily and more promptly effected. Application forms may be had on request.

Subscribers to THE JOURNAL who have not qualified as Fellows after formal application cannot register until they have so qualified.

Register Early

Fellows living in Atlantic City and New Jersey, as well as all other Fellows who are in Atlantic City on Monday and Tuesday, should register as early as possible. The names of those who register on the first day will appear in the *Daily Bulletin* the next day, and this will enable visiting physicians to find friends if they have registered.

Suggestions That Will Facilitate Registration

Fellows should fill out completely the spaces on both sections of the front of the *white* registration card, which will be found on the tables in front of the Registration Bureau.

Physicians who desire to qualify as Fellows should fill out completely the spaces on both sections of the front of the *blue* registration card, and sign the application on the back. These blue cards also will be found on the tables.

Physicians who take THE JOURNAL but who are not at present Fellows should fill out completely the spaces on both

sections of the front of the *blue* registration card, and sign the application on the reverse side.

Entries on the registration cards should be written plainly, or printed, as the cards are given to the printer to use as "copy" for the *Daily Bulletin.*

1. Fellows who have their pocket cards with them can be registered with little or no delay. They should present the filled out *white* registration card, together with their pocket cards, at one of the windows marked "Registration by Pocket Card." There the clerk will compare the two cards, stamp the pocket card and return it, and supply the Fellow with a copy of the official program and other printed matter of interest to those attending the annual session.

2. Those Fellows who have forgotten their pocket cards should present the filled in *white* registration card at the window marked "Paid—No Card." The work of registration at this window will be conducted as rapidly as possible; but the necessity of finding the Fellow's name on the Fellowship roster may occupy a considerable time and will occasion inconvenience to those who neglect to bring their pocket cards with them.

3. The Fellow whose 1925 dues are unpaid should present his filled in *white* registration card with the amount of his Fellowship dues ($5) at one of the windows marked "Cash." Here, too, there will be some delay; but the work of registering will be conducted as promptly as possible.

4. As previously stated, it will assist in registering if those who desire to qualify as Fellows will file their applications and qualify as Fellows by writing directly to the American Medical Association, 535 North Dearborn Street, Chicago, so that their Fellowship may be entered not later than May 8. Any applications received later than May 8 will be given prompt attention, but the Fellowship pocket card may not reach the applicant in time so that he can use it in registering at the Atlantic City Session.

As already stated, it will be possible for members of the organization to qualify as Fellows at Atlantic City. In order to do this, applicants for Fellowship will be required to fill out both sections of the front of the *blue* registration card and sign the formal application printed on the reverse side. It is suggested that those who apply for Fellowship at Atlantic City shall provide themselves, before leaving home, with certificates signed by the secretary of their state association, attesting that they are members in good standing in the state and county branches of the organization. A state membership card for 1925 will be acceptable. The certificate or membership card should be presented along with the filled in *blue* registration card at the window in the registration booth marked "Applicants for Fellowship and Invited Guests."

DIAGNOSTIC CLINICS

A series of Diagnostic Clinics, similar to those held at the Chicago Session, will be held during the Atlantic City Session, in the Music Hall, Ocean end of Steel Pier, Tuesday, May 26. The following is a tentative program and is subject to change:

9:00 a. m. The Technic and Practical Value of the Schick Test: Technic and Practical Value of Toxin-Antitoxin Immunization. JOHN A. KOLMER, Philadelphia.

10:00 a. m. Prevention of Scarlet Fever: Demonstration of Susceptibility; Immunization. JOHN A. KOLMER, Philadelphia.

11:00 a. m. Tuberculosis of Bones and Joints and Orthopedic Cases. E. G. BRACKETT, Boston.

12:00 a. m. Diagnosis of Cancer and Indications for Operation. JOSEPH COLT BLOODGOOD, Baltimore.

2:00 p. m. Heart Cases: Differential Diagnosis. LEWIS CONNER, New York.

3:00 p. m. Diagnosis and Treatment of Venereal Diseases. W. H. MACKINNEY, Philadelphia.

4:00 p. m. Syphilitic Lesions of Skin: Differential Diagnosis. FRANK SCHAMBERG, Philadelphia.

MAP OF ATLANTIC CITY

KEY TO MAP

1. Breakers
2. St. Charles
3. Jerome
4. Morton
5. Seaside
6. Strand
7. Haddon Hall
8. Chalfonte
9. Knickerbocker
10. Traymore
11. Brighton
12. Marlborough-Blenheim
13. Dennis
14. Ritz-Carlton
15. Ambassador
16. Chelsea

*Opening General Meeting; Registration Bureau; Scientific Exhibit; Technical Exhibit; Post Office; Information Bureau.

MOTOR ROADS TO ATLANTIC CITY

The Local Committee of Arrangements announces that those who wish to go to Atlantic City by automobile will find a great system of modern roads leading that way. Those coming up through Washington and Baltimore, those entering from the West through Pittsburgh, Cleveland, Philadelphia, and those from New England and the North will find roads of a splendid type throughout. All state roads are exceptionally good. Moreover, cities are close together, affording good places to stop over nights or to procure meals.

HOTEL SUN DECKS PROVIDE THE HEALTHFUL QUALITIES OF AN OCEAN VOYAGE WITHOUT SEASICKNESS

THE UMBRELLA COLONY

VISTA OF THE BOARDWALK

THE ATLANTIC CITY BEACH IS PERHAPS THE FINEST AND MOST POPULAR IN THE WORLD

ON THE BOARDWALK AND THE BEACH

ATLANTIC CITY HOTELS

Hotel Accommodations

Dr. C. L. Andrews, chairman of the Local Committee of Arrangements, has submitted the following information concerning hotels at Atlantic City:

The Local Hotel Committee of Arrangements has made definite arrangements with the Hotel Men's Association for ample accommodations for all who wish to attend the annual session.

A list of hotels with both the American and European plans with and without bath, with the exact location in the city, is here given.

The Hotel Committee prefers that each Fellow write to the hotel of his choice for reservations, and in all instances furnish the following information.

1. Whether single room or double room is desired.
2. Whether with or without bath.
3. When he will arrive and how long he wants to remain.

If satisfactory arrangements cannot be made by writing the hotel of choice direct, Dr. David B. Allman, chairman of the Local Hotel Committee, 104 St. Charles Place, or Dr. Clarence L. Andrews, chairman of the Local Committee on Arrangements, 1801 Pacific Avenue, will be glad to assist those having any difficulty.

All who intend to go to Atlantic City should make their hotel reservations at the earliest possible time and thus prevent confusion and assure themselves of accommodations at the hotels of their choice. Everybody will be well taken care of, as Atlantic City has abundant hotel capacity.

Daily Rates and Accommodations Offered by Atlantic City Hotels

Hotels Grouped by Location	Plan	Rooms Without Private Bath				Rooms With Private Bath			
		For One Person		For Two Persons		For One Person		For Two Persons	
		Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum
Boardwalk:									
ROYAL PALACE	American	$6.00	$8.00	$10.00	$14.00	$9.00	$12.00	$16.00	$20.00
ROYAL PALACE	European	None	None	None	None	None	None	None	None
BREAKERS	American	6.50	9.00	12.00	16.00	9.00	12.00	15.00	24.00
BREAKERS	European	2.50	5.00	4.00	8.00	5.00	8.00	7.00	14.00
ST. CHARLES	American	7.00	8.00	12.00	15.00	10.00	15.00	14.00	24.00
ST. CHARLES	European	None	None	None	None	None	None	None	None
SEASIDE	American	7.00	8.00	13.00	14.00	9.00	10.00	16.00	20.00
SEASIDE	European	None	None	None	None	None	None	None	None
STRAND	American	7.00	8.00	13.00	16.00	8.00	10.00	16.00	20.00
STRAND	European	None	None	None	None	None	None	None	None
CHALFONTE-HADDON HALL	American	6.00	8.00	12.00	14.00	10.00	.....	14.00	20.00
CHALFONTE-HADDON HALL	European	None	None	None	None	None	None	None	None
KNICKERBOCKER	American	6.00	8.00	11.00	14.00	8.00	12.00	14.00	18.00
KNICKERBOCKER	European	2.50	4.00	4.00	7.00	4.50	8.00	7.00	12.00
TRAYMORE	American	9.00	9.00	14.00	14.00	10.00	21.00	16.00	28.00
TRAYMORE	European	5.00	5.00	6.00	6.00	6.00	16.00	8.00	18.00
BRIGHTON	American	8.00	10.00	15.00	16.00	10.00	13.00	17.00	24.00
BRIGHTON	European	None	None	None	None	None	None	None	None
MARLBOROUGH-BLENHEIM	American	8.00	9.00	14.00	15.00	11.00	14.00	16.00	25.00
MARLBOROUGH-BLENHEIM	European	5.00	6.00	7.00	8.00	8.00	11.00	9.00	18.00
SHELBURNE*	American	None	None	None	None	None	None	None	None
SHELBURNE*	European	4.00	7.00	8.00	14.00	6.00	11.00	10.00	24.00
RITZ-CARLTON	American	None	None	None	None	10.00	13.00	16.00	22.00
RITZ-CARLTON	European	None	None	None	None	5.00	8.00	7.00	12.00
AMBASSADOR	American	None	None	None	None	None	None	None	None
AMBASSADOR	European	None	None	None	None	5.00	10.00	8.00	12.00
CHELSEA	American	$8.00	.....	$14.00	.....	$9.00	$10.00	$16.00	$18.00
CHELSEA	European	None	None	None	None	None	None	None	None
Massachusetts Avenue:									
GERSTEL'S LELANDE	American	$6.00	.....	$11.00	.....	.....	.....	$15.00	.....
GERSTEL'S LELANDE	European	None	None	None	None	None	None	None	None
THURBER	American	None	None	None	None	None	None	None	None
THURBER	European	1.50	$2.00	3.00	$4.00	$3.00	$4.00	.....	$5.00
Connecticut Avenue:									
GALEN HALL	American	6.00	7.00	11.00	13.00	8.00	11.00	14.00	18.00
GALEN HALL	European	None	None	None	None	None	None	None	None
New Jersey Avenue:									
GROSSMAN'S	American	7.00	8.00	12.00	15.00	9.00	10.00	15.00	18.00
GROSSMAN'S	European	None	None	None	None	None	None	None	None
St. Charles Place:									
RALEIGH	American	5.00	7.00	10.00	12.00	7.00	8.00	12.00	16.00
RALEIGH	European	2.50	5.00	5.00	8.00	4.00	6.00	6.00	10.00
Virginia Avenue:									
GERSTEL'S JEROME	American	5.50	6.50	10.00	12.00	7.00	8.00	13.00	15.00
GERSTEL'S JEROME	European	2.50	4.00	4.00	7.00	3.00	5.00	6.00	10.00
WILTSHIRE	American	4.50	5.50	9.00	11.00	.....	.....	11.00	12.00
WILTSHIRE	European	None	None	None	None	None	None	None	None
FRANKLIN	American	None	None	None	None	None	None	None	None
FRANKLIN	European	2.00	2.50	4.00	5.00	3.00	3.50	5.00	7.00
GOVERNOR	American	None	None	None	None	None	None	None	None
GOVERNOR	European	1.50	2.00	.....	.....	None	None	None	None
MORTON	American	4.50	5.00	9.00	10.00	6.00	7.00	11.00	13.00
MORTON	European	None	None	None	None	None	None	None	None
CLARENDON	American	5.00	6.00	9.00	10.00	6.00	7.00	10.00	12.00
CLARENDON	European	None	None	None	None	None	None	None	None
South Carolina Avenue:									
NEW ENGLAND	American	....	....	8.00	11.00	.....	.....	12.00	14.00
NEW ENGLAND	European	None	None	None	None	None	None	None	None
WATKINS	American	....	....	7.00	10.00	.....	.....	12.00	14.00
WATKINS	European	None	None	None	None	None	None	None	None
WARWICK	American	3.50	5.00	6.50	11.00	5.00	7.00	8.00	10.00
WARWICK	European	None	None	None	None	None	None	None	None
THOMPSON	American	3.50	4.00	6.00	8.00	None	None	None	None
THOMPSON	European	None	None	None	None	None	None	None	None
MULLICA	American	3.50	3.50	6.00	7.00	None	None	None	None
MULLICA	European	None	None	None	None	None	None	None	None
RADNOR	American	None	None	None	None	None	None	None	None
RADNOR	European	1.50	1.50	2.00	3.00	None	None	None	None

* Continental plan rates quoted by Shelburne include breakfast.

Daily Rates and Accommodations Offered by Atlantic City Hotels—(Continued)

Hotels Grouped by Location	Plan	Rooms Without Private Bath				Rooms With Private Bath			
		For One Person		For Two Persons		For One Person		For Two Persons	
		Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum
Ocean Avenue:									
Bon Air	American	3.50	4.50	7.00	8.00	None	None	None	None
Bon Air	European	1.25	1.50	2.50	3.00	None	None	None	None
Tennessee Avenue:									
Elberon	American	4.00	6.00	8.00	10.00	6.00	7.00	11.00	14.00
Elberon	European	2.00	4.00	4.00	6.00	4.00	5.00	7.00	10.00
Continental	American	4.00	5.00	8.00	10.00	6.00	8.00	10.00	12.00
Continental	European	2.00	3.00	4.00	5.00	3.50	4.00	7.00	8.00
Louvan	American	None	None	None	None	None	None	None	None
Louvan	European	2.00	3.00	3.00	4.00	None	None	None	None
Fredonia	American	None	None	None	None	None	None	None	None
Fredonia	European	2.50	.....	4.00	.....	3.00	.....	5.00	.....
St. James Place:									
Lockhart	American	4.00	5.00	7.00	9.00	6.00	7.00	10.00	14.00
Lockhart	European	2.00	3.00	4.00	6.00	4.00	5.00	8.00	10.00
St. James	American	3.50	5.00	7.00	8.00	None	None	None	None
St. James	European	2.00	3.50	3.00	3.50	None	None	None	None
William Penn	American	....	....	8.00	10.00	.....	.....	11.00	12.00
William Penn	European	None	None	None	None	None	None	None	None
Devonshire	American	4.50	5.00	8.00	10.00	.....	.....	10.00	14.00
Devonshire	European	....	2.50	4.00	5.00	.....	.....	7.00	8.00
Kentucky Avenue:									
New Clarion	American	5.00	6.00	8.00	10.00	7.00	8.00	11.00	13.00
New Clarion	European	2.00	2.50	3.00	4.00	4.00	5.00	5.00	7.00
Monticello	American	4.50	5.00	8.00	10.00	.....	.....	10.00	14.00
Monticello	European	....	2.50	4.00	5.00	.....	.....	7.00	8.00
Biscayne	American	4.00	5.00	8.00	10.00	5.00	6.50	10.00	13.00
Biscayne	European	2.00	3.00	4.00	6.00	3.00	4.50	6.00	8.00
Rittenhouse	American	3.50	4.00	7.00	9.00	5.00	7.00	10.00	12.00
Rittenhouse	European	1.50	2.50	3.00	5.00	3.00	4.00	5.00	6.00
Westminster	American	3.50	4.00	7.00	9.00	6.00	7.00	9.00	10.00
Westminster	European	2.00	2.50	4.00	5.00	3.00	3.50	5.00	6.00
Kentucky	American	4.00	6.00	7.00	10.00	5.00	7.00	10.00	12.00
Kentucky	European	2.00	3.00	3.00	5.00	3.00	5.00	5.00	8.00
Byron	American	5.00	6.00	8.00	10.00	6.00	7.00	11.00	13.00
Byron	European	....	....	....	.....	....	....	.....	.....
Illinois Avenue:									
Craig Hall	American	4.00	5.50	8.00	9.00	5.00	7.00	9.00	10.50
Craig Hall	European	None	None	None	None	None	None	None	None
Park Place:									
Glaslyn-Chatham	American	4.50	....	8.00	.....	6.00	.....	12.00	.....
Glaslyn-Chatham	European	None	None	None	None	None	None	None	None
Cheltenham-Revere	American	4.00	5.00	8.00	10.00	6.00	6.00	12.00	12.00
Cheltenham-Revere	European	2.50	....	5.00	.....	4.00	.....	8.00	.....
Michigan Avenue:									
Pennhurst	American	4.50	5.00	9.00	10.00	7.00	7.00	12.00	14.00
Pennhurst	European	None	None	None	None	None	None	None	None
Arlington	American	3.00	4.00	6.00	8.00	5.00	6.00	8.00	10.00
Arlington	European	1.50	2.00	3.00	5.00	3.00	3.50	4.50	6.00
Bryanton	American	3.50	4.50	6.00	8.00	5.00	5.50	8.00	9.00
Bryanton	European	2.00	2.25	3.00	4.00	2.50	3.00	5.00	6.00
Arkansas Avenue:									
Lexington	American	None	None	None	None	None	None	None	None
Lexington	European	1.50	3.00	2.00	4.00	3.00	4.00	4.00	7.00
Osborne	American	3.50	4.50	6.00	8.00	4.00	4.50	7.50	8.50
Osborne	European	1.50	2.00	3.00	3.50	2.50	3.50	4.50	6.00
Missouri Avenue:									
Gage	American	None	None	None	None	None	None	None	None
Gage	European	2.00	2.50	3.00	4.00	3.50	3.50	5.00	5.00
Pacific Avenue:									
Plaza	American	5.00	6.00	9.00	10.00	7.00	8.00	12.00	14.00
Plaza	European	None	None	None	None	None	None	None	None
Eastbourne	American	4.50	5.50	8.00	9.00	7.00	8.00	10.00	12.00
Eastbourne	European	None	None	None	None	None	None	None	None
Pennsylvania Avenue:									
Holmhurst	American	5.00	6.00	10.00	12.00	8.00	10.00	14.00	16.00
Holmhurst	European	None	None	None	None	None	None	None	None

NONAFFILIATED ORGANIZATIONS

The following organizations have announced meetings to be held in Atlantic City during the days immediately preceding or following those on which the sections of the Scientific Assembly will meet: American Association for the Study of Allergy; American Gastro-Enterological Association; American Laryngological, Rhinological and Otological Society; American Proctologic Society; American Therapeutic Society; Association for the Study of Internal Secretions; Medical Library Association; Medical Women's National Association; Radiological Society of North America.

ALPHA OMEGA ALPHA DINNER

Members of Alpha Omega Alpha, Honorary Medical Fraternity, will hold a dinner on Thursday evening, May 28. The meeting will adjourn promptly so that those present may attend the President's reception at the Hotel Ambassador.

WOMAN'S AUXILIARY

The Woman's Auxiliary of the American Medical Association will hold all of its meetings at the Hotel Traymore. The Executive Meeting will take place at 10 a. m., Tuesday, May 26; the dinner, to which all women attending the Annual Session of the American Medical Association are invited, at 7 p. m., Wednesday, May 27; the General Meeting, which is open to all, at 10 a. m., Thursday, May 28, and the Executive Meeting for the election of new officers, at 10 a. m. Friday, May 29.

MEDICAL WOMEN'S NATIONAL ASSOCIATION

The Medical Women's National Association will have its headquarters at the Marlborough-Blenheim Hotel. Wednesday May 29, it will have a banquet at the Ambassador, at $5 a plate. Subscriptions, with check, should be sent to Dr. Clara K. Bartlett, 4301 Atlantic Avenue, Atlantic City.

MEETING PLACES AND GENERAL HEADQUARTERS

HOUSE OF DELEGATES: Rose Room, Hotel Traymore, Illinois Avenue and Boardwalk.

GENERAL MEETING: Music Hall, Ocean End of Steel Pier, Virginia Avenue and beach.

PRACTICE OF MEDICINE: Vernon Hall, Hotel Haddon Hall, North Carolina and Boardwalk.

SURGERY, GENERAL AND ABDOMINAL: Music Hall, Ocean End of Steel Pier, Virginia Avenue and beach.

OBSTETRICS, GYNECOLOGY AND ABOMINAL SURGERY: Music Hall, Ocean End of Steel Pier, Virginia Avenue and beach.

OPHTHALMOLOGY: Dance Hall, Hotel Jerome, Virginia Avenue and Boardwalk.

LARYNGOLOGY, OTOLOGY AND RHINOLOGY: Dance Hall, Hotel Jerome, Virginia Avenue and Boardwalk.

DISEASES OF CHILDREN: Vernon Hall, Hotel Haddon Hall, North Carolina and Boardwalk.

PHARMACOLOGY AND THERAPEUTICS: Gold Room, Hotel Chalfonte, North Carolina and Boardwalk.

PATHOLGY AND PHYSIOLOGY: Gold Room, Hotel Chalfonte, North Carolina and Boardwalk.

STOMATOLOGY: Crystal Room, Hotel Breakers, New Jersey Avenue and Boardwalk.

NERVOUS AND MENTAL DISEASES: New Hall, Hotel Chalfonte, North Carolina and Boardwalk.

DERMATOLOGY AND SYPHILOLOGY: New Hall, Hotel Morton, Virginia Avenue near Boardwalk.

PREVENTIVE AND INDUSTRIAL MEDICINE AND PUBLIC HEALTH: New Hall, Hotel Haddon Hall, North Carolina and Boardwalk.

UROLOGY: New Hall, Hotel Morton, Virginia Avenue near Boardwalk.

ORTHOPEDIC SURGERY: New Hall, Hotel Chalfonte, North Carolina and Boardwalk.

GASTRO-ENTEROLOGY AND PROCTOLOGY: New Hall, Hotel Haddon Hall, North Carolina and Boardwalk.

MISCELLANEOUS TOPICS, SESSIONS ON RADIOLOGY: Crystal Room, Hotel Breakers, New Jersey Avenue and the Boardwalk.

MOVING PICTURE THEATER: Steel Pier, Virginia Avenue and beach.

DIAGNOSTIC CLINICS: Music Hall, Ocean End of Steel Pier, Virginia Avenue and beach.

GENERAL HEADQUARTERS OF SCIENTIFIC EXHIBIT, REGISTRATION BUREAU, TECHNICAL EXHIBIT, INFORMATION BUREAU, ASSOCIATION BRANCH POST OFFICE: Steel Pier, Virginia Avenue and beach.

PRESIDENT'S RECEPTION: Hotel Ambassador.

ENTERTAINMENT

The Local Committee of Arrangements, through its Committee on Entertainment, has authorized the following announcements. Other announcements will appear in later bulletins and more definite information will be given as to dates that are omitted here.

American Medical Golfing Association

The Eleventh Annual Tournament of the American Medical Golfing Association will be held at Seaview Golf Club, Atlantic City, Monday, May 25.

Dr. D. Chester Brown, Danbury, Conn., is president, Dr. Walt Conaway, Atlantic City, is secretary treasurer, and John Walter, Evanston, Ill., is business secretary of the American Medical Golfing Association.

After eighteen holes played in the forenoon, luncheon will be served at the club. A second eighteen holes will be played in the afternoon, followed by dinner at the club.

Any Fellow of the American Medical Association may join the American Medical Golfing Association by paying the enrolment fee and subscribing to the by-laws. Application for enrolment should be sent to John Walter, 1507 Hinman Avenue, Evanston, Ill.

Entertainment for Visiting Ladies

There will be a reception by the Local Ladies' Committee of Entertainment in the Vernon Room, Haddon Hall, North Carolina Avenue and Boardwalk.

Bus Ride and Tea at Country Club

There will be a tour of residential Atlantic City in the White and Blue Busses to the Northfield Country Club, where tea will be served to the visiting ladies.

Rolling Chair Ride on Boardwalk

There will be a rolling chair ride on the Boardwalk, led by the wives of the American Medical Association officials.

Recital at Famous High School

There will be a recital at Atlantic City's new high school, where music will be heard on one of the five finest pipe organs in the world.

ALUMNI ASSOCIATIONS AND FRATERNITIES

The time set for the meetings of clubs and general alumni associations is Wednesday evening. The following have already made special arrangements. Other organizations may issue their announcements through the *Daily Bulletin*.

Johns Hopkins Alumni Dinner

There will be an informal dinner for the Alumni of the Johns Hopkins University, at Hotel Chalfonte-Haddon Hall, North Carolina Avenue and the beach, Wednesday evening, at 7 o'clock. Those wishing to attend should send $5 to Dr. Clarence L. Andrews, 1801 Pacific Avenue, Atlantic City, N. J.

The Boston Floating Hospital Alumni Association Luncheon

The annual luncheon of the Boston Floating Hospital Alumni Association will be at the Hotel Traymore, at 12:30 p. m., Thursday, May 28. Dr. Lawrence W. Smith, 40 Wigglesworth Street, Boston, is secretary of this organization.

FOREIGN GUESTS AND DELEGATES

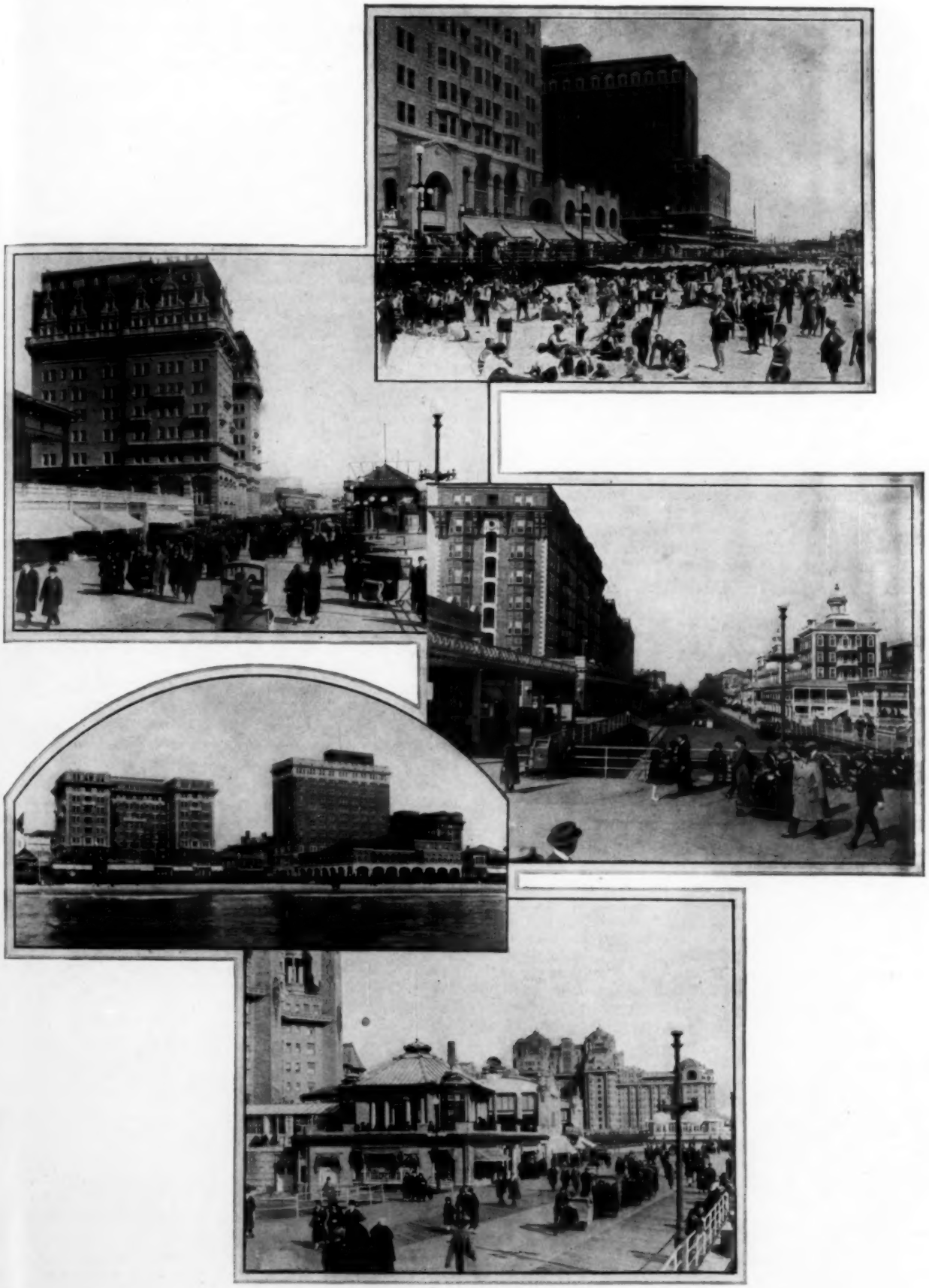
The following distinguished physicians and surgeons from foreign countries will be Invited Guests at the Atlantic City Session: J. Basil Hall, Bradford, England, president of the British Medical Association; T. Clarence Routley, Toronto, Canada, general secretary of the Canadian Medical Association; A. E. Barclay, Manchester, England; Edward Archibald, Montreal; C. D. Parfitt, Gravenhurst, Ontario, and Fulton Risdon, Toronto, Canada. It is probable that other distinguished foreign guests will be present.

Delegates from British Medical Association

The Association will be honored this year for the first time by the presence of official delegates from the British Medical Association. The names of these delegates are not yet available.

Delegate from Canadian Medical Association

Dr. T. Clarence Routley, general secretary of the Canadian Medical Association, has been appointed the official fraternal delegate from the Canadian Medical Association.



SOME ATLANTIC CITY HOTELS

Above: THE AMBASSADOR and RITZ CARLTON. Center, right: THE STRAND and SEASIDE. Center, left, above: THE "BREAKERS." Below: THE CHALFONTE and HADDON HALL. Below: THE MARLBOROUGH, BLENHEIM and THE TRAYMORE.

THE SCIENTIFIC EXHIBIT

The Scientific Exhibit will be located in the Ball Room, which is the middle building on the Steel Pier. Among the exhibits will be the following:

SPECIAL EXHIBITS

At the request of the Committee on Scientific Exhibit of the Board of Trustees, there will be two special exhibits. (These exhibits will not be entered for awards.)

MODEL PUBLIC HEALTH EXHIBIT IN MINIATURE: This exhibit will be under the direction of W. A. O'Brien, University of Minnesota. The exhibit will illustrate ideas for presentation of health education by physicians to lay persons in cancer, tuberculosis, goiter, nutrition, diphtheria, smallpox, etc.

MORBID ANATOMY EXHIBIT: Fresh pathologic material will be demonstrated daily. It is proposed to secure suitable material from necropsies in Philadelphia hospitals, augmented possibly by some from Atlantic City, and to demonstrate the organs in as fresh a state as possible. This undertaking is in charge of Drs. Allen J. Smith, head of the Department of Pathology, and Dr. Baldwin Lucké of the University of Pennsylvania.

PATHOLOGIC AND LABORATORY EXHIBITS

D. N. EISENDRATH, Chicago: (1) Relation of bladder reflux to renal infection; (2) radiography in diagnosis of renal neoplasms. Exhibit of lantern slides illustrating (1) the experimental and clinical observations on frequency of reflux of bladder contents into upper urinary tract: (2) displacement of renal pelvis and ureter by extrarenal neoplasms and conditions; also illustrations of deformities of renal pelvis and calices due to renal neoplasms.

HEART STUDY GROUP: GEORGE BLUMER, New Haven; ALEXANDER LAMBERT, New York (chairman); EMANUEL LIBMAN, New York, and S. CALVIN SMITH, Philadelphia: Modern methods of heart study. Last year this subject was handled by Drs. Blumer, Lambert and Smith, who, as a special committee, undertook the exhibit at the request of the Board of Trustees. This year this group intends to carry on, as individuals, in order to develop certain phases that could not be shown last year. The exhibit will consist of presentation of cardiac infections as shown by rheumatic involvement of the valves and aorta; the syphilitic involvement of the aorta and the valves; and acute and subacute endocarditis, including the possibilities and healing processes in these infections; also the nerve supply of the heart and angina pectoris will be presented. The electrocardiograph will be continued with some advanced work illustrating the changes that may be expected in the electrogram of heart muscle involvement. The heart study group has also arranged for four supplementary lectures in the Motion Picture Theater.

CHEVALIER JACKSON, Bronchoscopic Clinic, Philadelphia: Some phases of bronchoscopic work. (1) Lye burns and their prevention. Photographs of children with esophageal stenosis following the swallowing of household lye. Technical placards. (2) Photographs of foreign bodies removed from air and food passages; roentgenograms of foreign bodies. (3) Drawings and paintings of endoscopic views of bronchi, esophagus, stomach and pylorus in health and disease.

BENJAMIN S. KLINE, Mount Sinai Hospital, Cleveland: Spirochetal pulmonary gangrene. Exhibit of gross specimens, gross photographs, photomicrographs and charts.

MAYO CLINIC AND MAYO FOUNDATION GROUP, Rochester, Minn.: (1) S. H. MENTZER, Studies in pathogenesis of gallbladder diseases. Exhibit of specimens of gallbladders and gallstones, illustrating not only a very wide variety of lesions of the gallbladder but also the pathogenesis of such lesions. (2) M. HIYAMA, Method of recording lesions and abnormalities. Exhibit of satisfactory method to record lesions and abnormalities that are difficult to illustrate by usual method. (3) GORDON NEW, Collection of models of lesions of the nose and throat. Exhibit of a number of models of lesions of the nose and throat, employing the method illustrated in Exhibit 2.

ALEXANDER RANDALL, Philadelphia: Gross pathology of prostatic obstruction. Exhibit of approximately seventy-five specimens, showing (1) three different modes in which the prostate hypertrophies and causes obstruction; (2) median bar obstructions; (3) prostatic carcinoma.

ST. ELIZABETH'S HOSPITAL GROUP, Richmond, Va.: (1) J. S. HORSLEY, JR.: Sections and photographs of experimental work in the healing of blood vessels. (2) J. SHELTON HORSLEY: Specimens, drawings and microscopic slides illustrating nontyphoidal ulcers in the terminal ileum. (3) W. H. HIGGINS: Charts and photomicrographs illustrating an article on hypothyroid conditions. (4) J. SHELTON HORSLEY: Some unusual tumors. (5) HELEN LORRAINE: Drawings of operative procedures and pathologic specimens.

ST. LOUIS UNIVERSITY SCHOOL OF MEDICINE GROUP, St. Louis: (1) JOHN AUER (Department of Pharmacology): Graphs to illustrate teaching methods in laboratory pharmacology. (2) E. A. DOISY (Biochemistry): Specimens to show effect of commercial preparation, of extract of corpus luteum and of follicle fluid on the uterus and vagina of rabbits. (3) DAVIS H. DOLLEY (Pathology): Charts to show experimental work in normal and abnormal cytology. (4) M. S. FLEISHER (Bacteriology and Hygiene): Cultures, organisms and photographs to show the relation of *Monilia* to psoriasis. (5) HUBERT GRUENDER, S. J. (Psychology): Demonstration of new apparatus for testing color vision. (6) W. W. GRAVES (Nervous and Mental Diseases): Charts illustrating the age incidence of scapular types in successive age periods from the tenth fetal week to old age. (7) ALBERT KUNTZ (Anatomy): Curves showing the comparative resistance to fatigue in voluntary muscle and those deprived of sympathetic innervation; photographs showing effect of section of the sympathetic trunk; of section of the dorsal nerve roots; and of section of sympathetic trunk and dorsal nerve roots. (8) A. G. POHLMAN (Anatomy): Specimens to illustrate the middle ear mechanics of the bird's ear in reference to pressure changes in the external auditory canal. (9) A. G. POHLMAN and F. W. KRANZ, Riverbank Laboratories, Geneva, Ill.: Charts to illustrate the acuity of hearing for bone transmitted sound.

HUGH YOUNG and ASSOCIATES—E. C. WHITE, E. O. SWARTZ, E. G. DAVIS, D. M. DAVIS, J. H. HILL, J. A. C. COLSTON, W. W. SCOTT and E. CLAY SHAW, Baltimore: Researches in germicides and antiseptics at Brady Urologic Institute, Johns Hopkins University.

ABRAHAM L. WOLBARST, New York: Wax models of pathologic conditions in the male posterior urethra. Exhibit of hand-made models representing various pathologic conditions involving the verumontanum and posterior urethra and bladder neck.

MEDICAL, SURGICAL AND RADIOLOGIC EXHIBITS

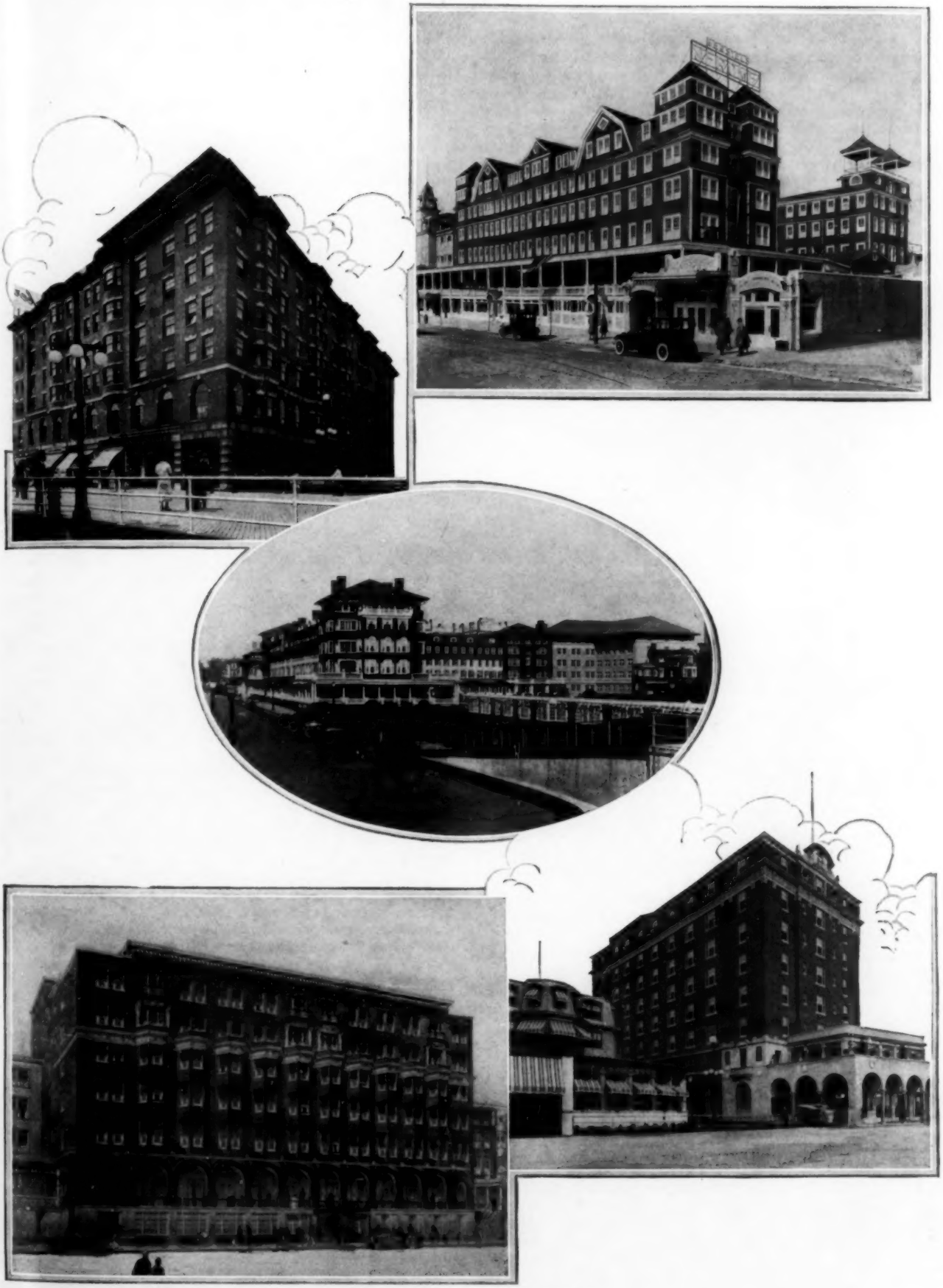
VILRAY P. BLAIR, St. Louis: Surgical correction of deformities of the external nose. Exhibit of drawings, photographs, plaster-of-Paris casts and lantern slides.

C. LATIMER CALLANDER, San Francisco: Photomicrographic studies of the morphology of surface capillaries in health and disease (from the Departments of Surgery and Anatomy, George Williams Hooper Foundation of Medical Research, University of California Medical School). Exhibit of enlarged photographs of surface capillaries with a view to determining the variations among normal capillaries. A comparison will be made with capillary photographs in such conditions as hypertension, diabetes, the vasomotor neuroses, vaso-obliterative conditions and wound healing.

JAMES T. GWATHMEY, New York Lying-in Hospital, New York: Obstetrical analgesia. Exhibit of slides, charts and photographs demonstrating the value of quinin, magnesium sulphate and ether when used in combination and given colonically, statistics, technic and amounts.

JAMES T. CASE, W. O. UPSON, W. F. MARTIN and C. E. RODERICK, Battle Creek, Mich.: Gastro-intestinal and bladder diverticula. Exhibit of prints of roentgenograms and other material; roentgenologic and pathologic aspects of diverticulosis of intestine, stomach and bladder.

HENRY A. COTTON, Trenton, N. J.: Exhibit of films, charts and drawings and gross specimens of infected teeth and tonsils.



SOME ATLANTIC CITY HOTELS

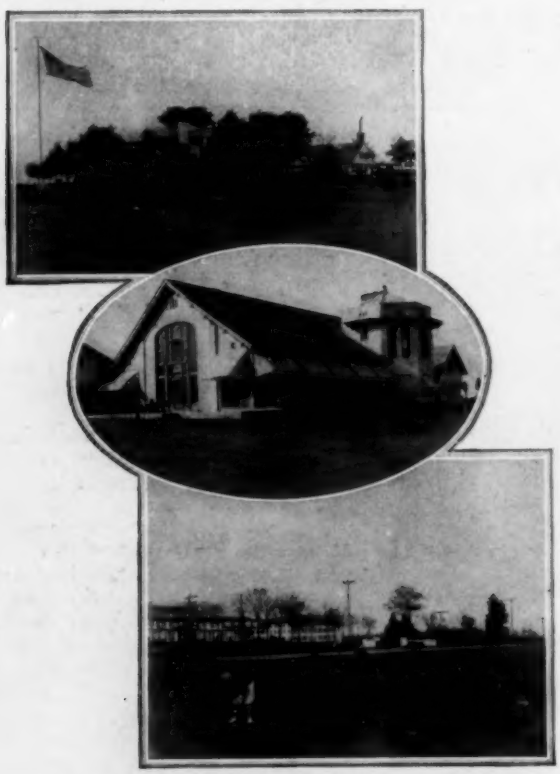
Upper left: THE KNICKERBOCKER. Upper right: THE JEROME. Center: THE BRIGHTON. Lower left: THE MORTON. Lower right: THE SHELBURNE.

AMÉDÉE GRANGER, New Orleans: Roentgenographic study of the mastoids. Exhibit illustrating method of making roentgenographs of mastoids in the Law and Arcelin positions, showing visible landmarks and illustrating the advantage of the Arcelin position for clinical study of the mastoids.

HOWARD GOSNER, Philadelphia: Color photographs. Exhibit of specimens illustrating the two color separation method of microscopic sections.

ROBERT H. IVY and L. M. ENNIS, Evans Dental Institute, Graduate School of Medicine, University of Pennsylvania, Philadelphia: Maxillofacial surgery and roentgenology. Exhibit of roentgenograms, diagrams, photographs, models and pathologic specimens illustrating diagnosis and treatment of abnormalities of teeth, jaws and face.

JOHN L. KANTOR, New York: Clinical study of some anatomic abnormalities of the colon. Exhibit of roentgen-ray prints of the redundant colon and the low cecum.



ATLANTIC CITY'S COUNTRY CLUBS
Above: NORTHFIELD. Center: LINWOOD. Below: SEAVIEW.

THOMAS MENEES and H. C. ROBINSON, Grand Rapids, Mich.: Oral cholecystography. Exhibit of roentgen-ray films showing normal and pathologic gallbladders visualized by oral administration of tetrabromphenolphthalein and tetra-iodophenolphthalein.

B. H. NICHOLS, Cleveland: Roentgen-ray studies in the diagnosis of diseases of the genito-urinary tract. Exhibit of photographs from roentgen-ray films and lantern slides showing various anomalies and lesions of the kidneys, ureters and bladder illustrating the problems in differential diagnosis.

SPECIAL EXHIBIT BY THE SECTION ON DERMATOLOGY AND SYPHILOLOGY

In connection with the Atlantic City Session, the Section on Dermatology and Syphilology will again conduct an exhibit. The committee in charge is composed of Howard Fox, New York; William Allen Pusey, Chicago, and Fred D. Weidman, Philadelphia. According to the plans of the committee, the exhibit will not be miscellaneous (as last year's was) but planned to illustrate the phases of syphilis in all stages; it is intended to make it of interest to the profession at large as well as to the members of the section. Circular letters explaining the exhibit, with application blanks, have been mailed to those who registered in the Section on Dermatology and Syphilology at the Chicago and Boston sessions. Others who desire this literature may obtain it by communicating with Fred D. Weidman, M.D., Medical Hall, University of Pennsylvania, Thirty-Sixth and Hamilton Walk, Philadelphia. All applications must be sent to Dr. Weidman

DANIEL N. SILVERMAN, New Orleans: Study of cholecystography during nonsurgical biliary drainage. Exhibit of roentgen-ray plates.

EDUCATIONAL EXHIBITS

AMERICAN ASSOCIATION OF HOSPITAL SOCIAL WORKERS, Chicago: Exhibit of posters and charts showing what the Hospital Social Workers organization is and what it accomplishes with patients.

AMERICAN FEDERATION OF ORGANIZATIONS FOR THE HARD OF HEARING, Washington, D. C.: Exhibit showing the work of the American Federation of Organizations for the Hard of Hearing. Charts, posters and literature bearing on the social work for the deafened in reference to (*a*) otologists, (*b*) general physician and the general public, (*c*) deafened people, and (d) social workers and educators.

AMERICAN HEART ASSOCIATION, New York: Exhibit of charts, descriptive of the preventive problems, value of organized care, educational facilities and development, to date.

AMERICAN LIBRARY ASSOCIATION, Chicago: Hospital Library Service. Exhibit of photographs and charts; also specimen of hospital book truck and literature in reference to hospital library service.

AMERICAN SOCIAL HYGIENE ASSOCIATION, New York: Researches in the diagnosis and treatment of syphilis and gonococcal infection. Exhibit of pathologic specimens, both macroscopic and microscopic, bacterial cultures and slides, photographs, photomicrographs, statistical tables, new drugs, etc., illustrating important researches made at Johns Hopkins, University of Michigan, Harvard, Washington University and other colleges, concerning new methods of diagnosis and treatment of syphilis and gonorrhea.

CONFERENCE OF FOREIGN MISSION BOARDS OF NORTH AMERICA, New York: Medical Missions. Exhibit of pictures, slides, posters, specimens, books, descriptive of the work of medical missions in various countries.

LOUIS I. DUBLIN, Metropolitan Life Insurance Company, New York: Three public health problems. Exhibit of charts on the following subjects: (1) typhoid fever in the United States, 1855 to date; (2) statistical aspects of the cancer problem; (3) suicide in relation to economic, geographic and racial factors.

LEAGUE OF NATIONS, Geneva, Switzerland: Exhibit of types of health work done under the auspices of the League of Nations, such as combating typhus and other epidemics, international standards for serums, international inquiries on cancer, and epidemiologic intelligence exchange.

NATIONAL BOARD OF MEDICAL EXAMINERS, Philadelphia: Exhibit of charts and other material describing the work of the National Board of Medical Examiners.

NEW YORK LEAGUE FOR THE HARD OF HEARING, New York: Service of the New York League for the Hard of Hearing. Exhibit of panels, charts and literature.

PHILADELPHIA BRANCH OF THE AMERICAN PHARMACEUTICAL ASSOCIATION, Philadelphia: Drugs and Preparations of the Pharmacopeia of the United States of America, Tenth Revision. Exhibit will consist of selected vegetable and animal drugs and also chemicals which will be official in the new United States Pharmacopeia.

PLAYGROUND AND RECREATION ASSOCIATION OF AMERICA, Chicago: Community Recreation. Exhibit of photographs, charts, posters and printed matter.

UNITED STATES BUREAU OF MINES, Department of the Interior, Washington, D. C.: Exhibit will feature the hazard of carbon monoxid poisoning, the prevalence, prevention, diagnosis and treatment. The diagnosis will be made with the aid of P. T. detectors. The details of prevention will be demonstrated from a platform in the booth.

UNITED STATES PUBLIC HEALTH SERVICE, Washington, D. C.; Exhibit of the work in the United States Public Health Service.

AMERICAN MEDICAL ASSOCIATION

COUNCIL ON PHARMACY AND CHEMISTRY: Cards and specimens illustrating the efforts of the Council in the interests of scientific medicine and rational prescribing. The methods by which the Council arrives at conclusions are explained.

THE AMERICAN MEDICAL ASSOCIATION CHEMICAL LABORATORY: Cards and specimens bearing on such subjects as the newer synthetics, comparative prices of proprietary and nonproprietary remedies, and drug control.

PROPAGANDA DEPARTMENT OF THE AMERICAN MEDICAL ASSOCIATION: Exhibit of: (1) a series of educational posters; (2) specimens of pamphlets published for the purpose of furnishing information easily and quickly to the public, and (3) the volumes of "Nostrums and Quackery."

COUNCIL ON MEDICAL EDUCATION AND HOSPITALS: Reliable information and statistics on phases of medical education, licensure, reciprocity, hospitals, postgraduate courses and accredited internships. Also the hospital facilities of each state and county throughout the country. Graphic charts and hand colored maps are employed to show facts at a glance.

BUREAU OF HEALTH AND PUBLIC INSTRUCTION: (1) Exhibit of charts on baby welfare, educational pamphlets and *Hygeia*, the new journal of health for the public; (2) charts and pamphlets showing cooperative work of the National Education Association and the bureau.

WATCHING THE WAVES FROM THE "SUN DECK" OF A HOTEL

MOTION PICTURE THEATER

The Motion Picture Theater will be located on the second floor of the Casino, which is the entrance from the Boardwalk to the Steel Pier. The theater will open at noon on Monday and run continuously each day thereafter from 9 a. m. to 6 p. m. and until 4 p. m. on Friday. Each speaker will demonstrate the talk with either lantern slides or motion pictures.

R. A. BARR, Nashville, Tenn.: Principles Involved in Surgical Treatment of Peptic Ulcer. Illustrated with lantern slides.

FRANK BILLINGS, Chicago:

JOSEPH BLOODGOOD, Baltimore: Diagnosis and Treatment of Benign and Precancerous Lesions of the Mouth. Illustrated with Lantern slides.

HUGH CABOT, Ann Arbor, Mich.: Stone in Kidney or Ureter. Illustrated with lantern slides.

ALEXIS CARREL, New York: The Life of Pure Cultures of Tissues. (In cooperation with ALBERT H. EBELING.) Illustrated with motion pictures.

LEWIS GREGORY COLE, New York: Pulmonary Tuberculosis. Anatomy, pathology and roentgenology, showing progress of a case. Illustrated with motion pictures.

ARTHUR J. CRAMP, Director, Bureau of Investigation, THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION: (1) Alcohol in "Patent Medicines"; (2) Cosmetic Nostrums. Illustrated with lantern slides.

W. T. DAWSON, Philadelphia: Visible Human Heart Block. Illustrated with motion pictures.

JOSEPH B. DeLEE, Chicago: Normal Labor and Eclampsia. Illustrated with motion pictures.

REX L. DIVELEY, Kansas City, Mo.: Infantile Paralysis: (*a*) The Acute Stage; (*b*) Convalescent Stage; (*c*) Chronic or Deformative Stage. Illustrated with motion pictures.

W. W. DUKE, Kansas City, Mo.: A Story of Pollen Diseases. Illustrated with lantern slides.

J. EARLE ELSE, Portland, Ore.: Relationship of the Clinical to the Pathologic in Exophthalmic Goiter. Illustrated with lantern slides.

HAVEN EMERSON, New York: Increasing Life Expectancy. Illustrated with lantern slides.

C. W. FINNERUD, Chicago: Small Ringworm Affections: Diagnosis and Treatment (Microsporosis). Illustrated with motion pictures.

HERMAN GOODMAN, New York: Syphilis and Frambesia Tropica: A Comparison. Illustrated with lantern slides.

HEART STUDY TALKS: The group that is continuing the heart exhibit shown at Chicago last year announces four

talks related to the proposed exhibit at Atlantic City: (1) Anatomy of the Nerve Supply of the Heart; (2) Angina Pectoris and Coronary Thrombosis; (3) Affections of the Valves of the Heart; (4) Aortitis. The names of the speakers have not been announced.

CARL A. HEDBLOM, Madison, Wis.: Lesions of the Thorax Amenable to Surgical Treatment. Illustrated with lantern slides.

JULIUS H. HESS, Chicago: Care and Feeding of Premature and Congenitally Diseased Infants. Illustrated with lantern slides.

EDWARD LIVINGSTON HUNT, New York: The Clinical Diagnosis of Common Neurologic Diseases, with Particular Reference to Gaits and Nerve Reactions. Illustrated with motion pictures.

CHEVALIER JACKSON, Philadelphia: Poisoning of Children by Household Lye; Bronchoscopy in the Treatment of Suppurative Diseases of the Lung. Illustrated with motion pictures and lantern slides.

HERMAN L. KRETSCHMER, Chicago: Diagnostic Problems in Urology. Illustrated with lantern slides.

WILLS MACLACHLAN, Toronto: Prone Pressure Method of Resuscitation. Illustrated with motion pictures.

F. C. MANN, Rochester: (1) Observation on the Relation of the Liver to Carbohydrate Metabolism; (2) Observation on the Relation of the Liver to Protein Metabolism; (3) The Extrahepatic Formation of Bilirubin. Illustrated with motion pictures and lantern slides.

THOMAS G. ORR, Kansas City, Kan.: Application of Blood Chemical Studies to the Treatment of Intestinal Obstruction. Illustrated with lantern slides.

JOHN O. POLAK, Brooklyn: Pathology of Postpartum Infection. Illustrated with lantern slides.

A. N. RICHARDS, Philadelphia: Illustrated with motion pictures.

C. E. RODERICK, Battle Creek, Mich.: Complement Fixation Test for Syphilis. Illustrated with motion pictures.

STEWART R. ROBERTS, Atlanta, Ga.: The Size and Shape of the Average Normal and the Diseased Heart. Illustrated with lantern slides.

FRANK SMITHIES, Chicago: The Quantitative, Qualitative and Biologic Effects of Transfusion of Whole Blood on the Blood of the Recipient. Illustrated with lantern slides.

IRVING F. STEIN, Chicago: Roentgenographic Diagnosis in Gynecology. Illustrated with lantern slides.

WALTER G. STERN, Cleveland: The Ohio Plan of State Aid for Indigent Crippled Children. Illustrated with motion pictures.

JOHN STOKES, Philadelphia: Diagnostic Interpretations of Cutaneous Pigmentation and Scars. Illustrated with lantern slides.

HENRY BASCOM THOMAS, Chicago: (1) Chronic Osteomyelitis; (2) Potts Fracture. Illustrated with lantern slides.

RAY LYMAN WILBUR, Stanford University, Calif.: Title to be announced in official program.

ABRAHAM ZINGHER, New York: Modern Methods in the Prevention and Control of Diphtheria, Scarlet Fever and Measles. Demonstration of Dick and Schick Reactions. Illustrated with lantern slides.

FRANK BILLINGS, Chicago: Available Simple and Feasible Methods of Approximate Functional Diagnosis in Chronic Nephritis. Illustrated with lantern slides.

AMERICAN SOCIETY FOR THE CONTROL OF CANCER, New York: Motion Picture Film: The Place of Prevention in Cancer Control.

AMERICAN SOCIAL HYGIENE ASSOCIATION: Motion Picture Films (*a*) Stimulating Interest in the Control of Venereal Diseases; (*b*) The Public Health Twins at Work.

UNITED STATES DEPARTMENT OF AGRICULTURE: Motion Picture Film "Pasteur." This film is a gift from the French government to the United States.

UNITED STATES PUBLIC HEALTH SERVICE: "The Science of Life." The talk for this film will be given by Maurice Ricker.

LOCAL COMMITTEE OF ARRANGEMENTS

The Local Committee of Arrangements, its Advisory Council and the chairmen of its subcommittees are: Local Committee of Arrangements: Clarence L. Andrews, 1801 Pacific Avenue, Atlantic City, chairman; Henry T. Harvey, secretary, and Edwin H. Harvey, treasurer. Advisory Council: Philip Marvel, Sr.; W. Blair Stewart; Walt P. Conaway, and William Edgar Darnall. Chairmen of subcommittees: Finance, W. Blair Stewart; Entertainment, Walt P. Conaway; Hotels, David B. Allman; Halls and Meeting Places, William J. Carrington; Scientific Exhibits, Samuel Stern; Registration, Ward D. Scanlan; Section Work, Philip Marvel, Jr.; Diagnostic Clinics, Richard Bew; Technical Exhibit, I. E. Leonard; Reception Committee, Coulter Charlton; First Aid, John T. Beckwith; Printing, Joseph H. Marcus; Section Entertainment, Samuel Barbash; Alumni and Fraternal Entertainment, Worth Clark; Programs, Edward Uzzell; Information, Byron Davis; Telegraph and Telephone, Joseph Poland; Badges, Harold S. Davidson; Women Physicians, Clara K. Bartlett, and Women's Committee of Entertainment, Mrs. Worth Clark.

DAYLIGHT SAVING TIME

Daylight saving time, which is one hour ahead of Eastern Standard time, will be in effect in Atlantic City in May.

POSTOFFICE

A branch postoffice will be installed, in connection with the Registration Bureau, at the Steel Pier. Members and guests are requested to order mail addressed to them "Care American Medical Association, Steel Pier, Atlantic City, N. J.," unless they prefer to receive mail at the hotels. Telegrams should also be addressed to the Steel Pier if hotel reservations have not been made.

SPECIAL TRAIN FROM CHICAGO

The Pennsylvania Railroad will operate a special train for the convenience of members living in Chicago and those who will go from other points by way of Chicago. This train will leave Chicago at 8 p. m., Central Standard Time, Sunday, May 24, and is due to arrive in Atlantic City at 5:25 p. m., Eastern Standard Time, Monday, May 25. While a fast schedule will be observed, no extra fare will be charged. Information concerning this train can be secured from W. E. Blachley, Division Passenger Agent, Pennsylvania Railroad System, Union Station, Chicago.

MEDICAL OFFICERS OF THE WORLD WAR DINNER

Dr. Burt R. Shurly, 62 Adams Avenue West, Detroit, announces that there will be a dinner, Wednesday, May 27, at 7 p. m., for all medical officers of the World War. Any one commissioned and honorably discharged, who served at any time from the beginning of the World War until its close, Nov. 11, 1918, is eligible and cordially invited to attend. A more detailed announcement of this dinner will be published later.

Bring Your 1925 Fellowship Pocket Cards

Secure CERTIFICATE from agent when railroad ticket is purchased to Atlantic City. This CERTIFICATE must be validated to secure one-half fare for return trip.

If you bring your 1925 Fellowship Pocket Card, you will find registration a simple and speedy matter. Otherwise you may be subjected to considerable delay.

PRELIMINARY PROGRAM OF THE SCIENTIFIC ASSEMBLY

PROGRAM OF THE OPENING MEETING

Tuesday, May 26, 8:30 p. m.

Music.

Call to Order by the President, WILLIAM ALLEN PUSEY, Chicago.

Invocation. REV. THOMAS J. CROSS, Pastor, Chelsea Baptist Church, Atlantic City.

Announcements. CLARENCE L. ANDREWS, Chairman, Local Committee of Arrangements.

Address of Welcome. L. F. DONOHOE, President, Medical Society of New Jersey.

Address of Welcome. D. WARD SCANLAN, President, Atlantic County Medical Society.

Music.

Introduction and Installation of President-Elect WILLIAM D. HAGGARD, Nashville, Tenn.

Address. WILLIAM D. HAGGARD.

Music.

THE PROGRAMS OF THE SECTIONS

Outline of the Scientific Proceedings—The Preliminary Program and the Official Program

The following papers are announced to be read before the various sections. The order here is not necessarily the order that will be followed in the Official Program, nor is the list complete. The Official Program will be similar to those issued in previous years, and will contain the final program of each section with abstracts of the papers, as well as lists of committees, programs of the General Meeting, lists of entertainments, map of Atlantic City, and other information. To prevent misunderstandings and to protect the interest of advertisers, it is here announced that this Official Program will contain no advertisements. It is copyrighted by the American Medical Association and will not be distributed before the session. A copy will be given to each Fellow on registration.

SECTION ON PRACTICE OF MEDICINE

MEETS IN VERNON HALL IN HADDON HALL

OFFICERS OF SECTION

Chairman—ELLIOTT P. JOSLIN, Boston.

Vice Chairman—H. Z. GIFFIN, Rochester, Minn.

Secretary—EUGENE S. KILGORE, San Francisco.

Executive Committee—NELLIS B. FOSTER, New York; JOSEPH A. CAPPS, Chicago; ELLIOTT P. JOSLIN, Boston.

Wednesday, May 27—9 a. m.

The Causes of Peptic Ulcer.
R. MANNING CLARKE, Los Angeles.
Discussion to be opened by JULIUS FRIEDENWALD, Baltimore, and MARTIN E. REHFUSS, Philadelphia.

The Function of the Liver (Lantern Demonstration).
WILLIAM J. KERR, San Francisco.

Splenectomy in Cases of Banti's Disease (Lantern Demonstration). NATHAN ROSENTHAL, New York.

Incipient Hypothyroidism: A Clinical Study (Lantern Demonstration). WILLIAM H. HIGGINS, Richmond, Va.

The Pathogenesis of Exophthalmic Goiter (Lantern Demonstration). H. T. HYMAN, New York.

Basal Metabolism in Clinical Medicine (Lantern Demonstration). HENRY S. PLUMMER, Rochester, Minn.
Discussion on Papers of DRS. HIGGINS, HYMAN and PLUMMER to be opened by LEWELLYS F. BARKER, Baltimore, and JAMES H. MEANS, Boston.

Thursday, May 28—9 a. m.

Chairman's Address: The Growth, Development and Prognosis of Diabetic Children.
ELLIOTT P. JOSLIN, Boston.

The Causal Mechanism of Diabetes Mellitus (Lantern Demonstration). ALBERT A. EPSTEIN, New York.
Discussion on Papers of DRS. JOSLIN and EPSTEIN to be opened by F. M. ALLEN, Morristown, N. J., and REGINALD FITZ, CHARLES H. LAWRENCE and A. W. ROWE, Boston.

The 1923 Kansas Epidemic of Infantile Paralysis: Final Report. REXFORD L. DIVELEY, Kansas City, Mo.

Treatment of Bronchial Asthma (Lantern Demonstration).
ALBERT H. ROWE, Oakland, Calif.
Discussion to be opened by ISAAC C. WALKER, Boston.

Spirochetal Pulmonary Gangrene with Specific Treatment (Lantern Demonstration).
B. S. KLINE and S. S. BERGER, Cleveland.
Discussion to be opened by JOSEPH SAILOR, Philadelphia.

Pulmonary Tuberculosis, Prolonged Rest and the Absorption of Deposits (Lantern Demonstration).
GERALD B. WEBB, Colorado Springs, Colo.
Discussion to be opened by F. M. POTTENGER, Monrovia, Calif., and LAWRASON BROWN, Saranac Lake, N. Y.

Friday, May 29—9 a. m.

Election of Officers

Nonsyphilitic Aortitis. LESTER NEUMAN, Washington, D. C.

Hypodermic Digitalis Preparations: A Clinical Study (Lantern Demonstration).
HAROLD E. B. PARDEE, New York.
Discussion on Papers of DRS. NEUMAN and PARDEE to be opened by WILLIAM S. THAYER, Baltimore, and CARY EGGLESTON, New York.

Is Arteriosclerosis a Hereditary Constitutional Disease? (Lantern Demonstration).
M. A. MORTENSEN, Battle Creek, Mich.

The Dietetic Factor in the Etiology of Renal Disease (Lantern Demonstration).
L. H. NEWBURGH and P. L. MARSH, Ann Arbor, Mich.

Clinical and Experimental Renal Deficiency (Lantern Demonstration).
FREDERICK M. ALLEN, Morristown, N. J.

Chronic Nephritis (Lantern Demonstration).
HENRY A. CHRISTIAN, Boston.
Discussion on Papers of DRS. MORTENSEN, NEWBURGH, MARSH, ALLEN and CHRISTIAN to be opened by W. W. PALMER, New York, and W. D. SANSUM, Santa Barbara, Calif.

SECTION ON SURGERY, GENERAL AND ABDOMINAL

MEETS IN MUSIC HALL, OCEAN END OF STEEL PIER

OFFICERS OF SECTION

Chairman—EVARTS A. GRAHAM, St. Louis.

Vice Chairman—VERNON C. DAVID, Chicago.

Secretary—J. TATE MASON, Seattle.

Executive Committee—EUGENE H. POOL, New York; URBAN MAES, New Orleans; EVARTS A. GRAHAM, St. Louis.

Wednesday, May 27—2 p. m.

The Unknown Mortality in Surgery.
BERTRAM M. BERNHEIM, Baltimore.

Unperforated Ulcers of the Terminal Ileum, Symptomatically Simulating Appendicitis (Lantern Demonstration).
J. SHELTON HORSLEY, Richmond, Va.

Hypertrophic Pyloric Stenosis: A Study of Five Hundred Cases. RICHARD WALKER BOLLING, New York.

Amebic Abscess of the Liver: Report of Case Complicated by Subphrenic Abscess.
ALEXIUS MCGLANNAN, Baltimore.

Acute Conditions Within the Abdomen.
JOHN WOODSON BARKSDALE, Jackson, Miss.

Management of Esophageal Strictures (Lantern Demonstration). JOSEPH RILUS EASTMAN, Indianapolis.

Atypical Toxic Thyroid (Lantern Demonstration). J. EARL ELSE, Portland, Ore.

Present Day Surgery of the Thyroid (Lantern Demonstration). JOHN DEJARNETTE PEMBERTON, Rochester, Minn.

Thursday, May 28—2 p. m.

Chairman's Address (Lantern Demonstration). EVARTS A. GRAHAM, St. Louis.

Pulmonary Tuberculosis: Its Surgical Treatment (Lantern Demonstration). EDWARD W. ARCHIBALD, Montreal.

Diaphragmatic Hernia (Lantern Demonstration). CARL ARTHUR HEDBLOM, Madison, Wis.

Surgical Drainage in Infection of the Liver, Bile Ducts and Gallbladder (Lantern Demonstration). ANDREW STEWART LOBINGIER, Los Angeles.

The Alteration of Bile Pigment Metabolism in Biliary Tract Infections (Lantern Demonstration). GEORGE P. MULLER, I. S. RAVDIN and ELIZABETH RAVDIN, Philadelphia.

Surgical Procedures in Jaundiced Patients (Lantern Demonstration). E. STARR JUDD, Rochester, Minn.

Purpura Hemorrhagica Considered Surgically. ALLEN O. WHIPPLE, New York.

Total and Subtotal Restoration of the Nose (Lantern Demonstration). VILRAY PAPIN BLAIR, St. Louis.

Friday, May 29—2 p. m.

Election of Officers

Recurrent Dislocations of the Shoulder. T. TURNER THOMAS, Philadelphia.

Determination of Local Compression as an Indication for Laminectomy in Acute Injury of Spinal Cord. CLAUDE C. COLEMAN, Richmond, Va.

Excision of Cancer with the Cautery: End-Results in Seven Hundred Cases (Lantern Demonstration). ARTHUR CARROLL SCOTT, Temple, Texas.

The Late Results of Some Nerve Injuries. DEAN LEWIS and EDWIN M. MILLER, Chicago.

Subtotal Gastrectomy (Lantern Demonstration). JOHN B. DEAVER, Philadelphia.

Complete Gastrectomy. JOHN M. T. FINNEY, Baltimore.

Surgery of the Upper Abdomen: Special Points (Lantern Demonstration). GEORGE W. CRILE, Cleveland.

SECTION ON OBSTETRICS, GYNECOLOGY AND ABDOMINAL SURGERY

MEETS IN MUSIC HALL, OCEAN END OF STEEL PIER

OFFICERS OF SECTION

Chairman—RUDOLPH W. HOLMES, Chicago.

Vice Chairman—HAROLD C. BAILEY, New York.

Secretary—CARL HENRY DAVIS, Milwaukee.

Executive Committee—HARRY S. CROSSEN, St. Louis; FRANK W. LYNCH, San Francisco; RUDOLPH W. HOLMES, Chicago.

Wednesday, May 27—9 a. m.

Tuberculosis of the Vagina (Lantern Demonstration). LAWRENCE R. WHARTON, Baltimore.

Isthmospasm of the Fallopian Tube (Lantern Demonstration). WILLIAM T. KENNEDY, New York.
Discussion to be opened by I. C. RUBIN, New York.

Distribution of the Ovarian Follicular Hormone in Human Genital Tissues (Lantern Demonstration). EDGAR ALLEN, Columbia, Mo., and J. P. PRATT, Detroit.
Discussion to be opened by EMIL NOVAK, Baltimore.

The Average Sex Life of American Women and the Relation Between Experiences and Genital Findings (Lantern Demonstration). ROBERT L. DICKINSON, New York.

Dilatation of the Ureter and Kidney Pelvis During Pregnancy (Lantern Demonstration). HERMAN L. KRETSCHMER and N. SPROAT HEANEY, Chicago.

Radium Treatment of Carcinoma of the Cervix Uteri: Results at the Women's Hospital, New York, After Five Years (Lantern Demonstration). GEORGE GRAY WARD and LILLIAN K. FARRAR, New York.

Thursday, May 28—9 a. m.

Chairman's Address: The Ideal Relationship of Obstetrics-Gynecology to General Surgery and the Surgical Specialties. RUDOLPH W. HOLMES, Chicago.

The Surgical Treatment of Varicose Veins of the Female Pelvis (Lantern Demonstration). LUDWIG A. EMGE, San Francisco.
Discussion to be opened by JOHN O. POLAK, Brooklyn.

Centric Puerperal Palsies. JAMES E. TALLEY and DOROTHY L. ASHTON, Philadelphia.
Discussion to be opened by JAMES R. HUNT, New York.

Intracranial Hemorrhages in the New-Born (Lantern Demonstration). WILLIAM SHARPE and A. S. MACLAIRE, New York.

Pelvimetry of the Superior Strait by Means of the Roentgen Ray (Lantern Demonstration). HERBERT THOMS, New Haven, Conn.

The Ischial-Ramic Diameter: The Origin of the Common Left Cervical Tear and Its Prevention (Lantern Demonstration). JOHN P. GARDINER, Toledo, Ohio.

The Treatment of Hyperemesis Gravidarum by Intravenous Injections of Glucose, and Carbohydrate Feedings (Lantern Demonstration). PAUL TITUS, Pittsburgh.
Discussion to be opened by GEORGE W. KOSMAK, New York.

Friday, May 29—9 a. m.

Election of Officers

SYMPOSIUM ON POOR SURGICAL RISKS

Poor Surgical Risks: Laboratory Assistance in Preparation for Operation and in Postoperative Care (Lantern Demonstration). WILLIAM THALHIMER, Milwaukee.

Abdominal Surgery in Patients with Diabetes (Lantern Demonstration). DANIEL FISKE JONES, Boston.

Reducing the Surgical Risk in Some Gastro-Intestinal Conditions (Lantern Demonstration). THOMAS G. ORR and RUSSELL L. HADEN, Kansas City, Mo.

Abnormal Functioning of the Liver. WILLIAM J. MAYO and WALTHAM WALTERS, Rochester, Minn.

The Poor Risk for Surgery of the Pelvis. JOHN G. CLARK, Philadelphia.

The Preparation of the Surgical Handicapped Patient, with Special Reference to Vital Capacity. JOHN L. YATES, Milwaukee.

The Value of Organized Surgery to the Poor Surgical Risk. FRANK H. LAHEY, Boston.

SECTION ON OPHTHALMOLOGLY

MEETS IN DANCE HALL, HOTEL JEROME

OFFICERS OF SECTION

Chairman—MARCUS FEINGOLD, New Orleans.

Vice Chairman—J. M. PATTON, Omaha.

Secretary—WILLIAM C. FINNOFF, Denver.

Executive Committee—JOHN O. MCREYNOLDS, Dallas, Texas; GEORGE S. DERBY, Boston; MARCUS FEINGOLD, New Orleans.

Fellows are reminded that the meetings of the section will be called to order promptly on the hour scheduled for opening. The formal reading of the papers will be omitted, as reprints of the papers on the program have already been delivered to Fellows.

Each essayist will be given ten minutes in which to summarize the points in his paper and introduce the discussion (except in the case of five minute papers), and five minutes in which to close the discussion.

The Fellows appointed to open the discussion of any paper will be allowed ten minutes. Subsequent speakers will be limited to five minutes.

The papers and all discussions will be printed and bound, forming the Transactions of the Section on Ophthalmology for 1925. Copies of the Transactions may be obtained at $1.50 each, if subscriptions are sent to THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, 535 North Dearborn Street, Chicago, by June 1, as only enough copies are printed to cover subscriptions received to the time of going to press.

Fellows are requested to register in the section registration book at the entrance. The full name and complete post-office address should be written plainly.

Wednesday, May 27—2 p. m.

Chairman's Address. MARCUS FEINGOLD, New Orleans.

Lumen of the Lacrimonasal Passageways as Influenced by Anatomic Features: Its Significance in Clinical Work (Lantern Demonstration).
J. PARSONS SCHAEFFER, Philadelphia.

Epithelioma of the Lacrimal Sac.
RALPH A. FENTON, Portland, Ore.

Interstitial Keratitis (Lantern Demonstration).
GEORGE S. DERBY and MAUD CARVILL, Boston.

Melanosarcoma of the Choroid with Extension to the Orbit: Report of Case. EDWARD STIEREN, Pittsburgh.

Oculist or Optometrist—Which?
JAMES M. PATTON, Omaha.

Anatomic Method of Studying and Recording the Motility of the Eyes (Lantern Demonstration).
LUTHER C. PETER, Philadelphia.

Thursday, May 28—2 p. m.

Tuberculosis Affecting the Optic Chiasm with Secondary Optic Nerve Atrophy and Retinitis: Diagnosis and Treatment with Tuberculin (Lantern Demonstration).
WILLIAM E. GAMBLE and RICHARD C. GAMBLE, Chicago.

The Diagnosis of Blindness. EDWARD JACKSON, Denver.

Visual Efficiency of Various Degrees of Subnormal Visual Acuity: Its Effect on Earning Ability.
ALBERT C. SNELL, Rochester, N. Y.

Alternating Convergent Squint.
E. L. GOAR, Houston, Texas.

Ocular Muscle Balance Following Prolonged Monocular Occlusion. C. S. O'BRIEN, Indianapolis.

Diabetic Retinitis. HARRY FRIEDENWALD, Baltimore.

Ocular Phenomena Produced by Temporal Lobe Tumors (Lantern Demonstration).
W. I. LILLIE, Rochester, Minn.

Friday, May 29—2 p. m.

Election of Officers

The Trachoma Problem Among the North American Indians.
L. WEBSTER FOX, Philadelphia.

The Surgery of Trachoma: Practical Problems (Lantern Demonstration). S. LEWIS ZIEGLER, Philadelphia.

Electric Cataract.
WALTER SCOTT FRANKLIN and FREDERICK C. CORDES, San Francisco.

The Untied Suture in Cataract Extraction: Conclusions (Lantern Demonstration).
CONRAD BERENS, New York.

The Management of Prolapse of the Iris.
ALBERT E. BULSON, JR., Fort Wayne, Ind.

Allergic and Toxic Properties of Lens Protein.
SANFORD R. GIFFORD, Omaha.

Foreign Protein in Eye Work at Presbyterian Hospital, Chicago. THOMAS D. ALLEN, Chicago.

SECTION ON LARYNGOLOGY, OTOLOGY AND RHINOLOGY

MEETS IN DANCE HALL, HOTEL JEROME

OFFICERS OF SECTION

Chairman—CHARLES W. RICHARDSON, Washington, D. C.

Vice Chairman—FIELDING O. LEWIS, Philadelphia.

Secretary—SAMUEL IGLAUER, Cincinnati.

Executive Committee—WILLIAM B. CHAMBERLIN, Cleveland; WENDELL C. PHILLIPS, New York; CHARLES W. RICHARDSON, Washington, D. C.

Wednesday, May 27—9 a. m.

Chairman's Address.
CHARLES W. RICHARDSON, Washington, D. C.

SYMPOSIUM ON TREATMENT OF PARANASAL SINUS DISEASE

Paranasal Sinus Disease in Infants and Young Children (Lantern Demonstration). LEE W. DEAN, Iowa City.
Discussion to be opened by WILLIAM M. MARRIOTT, St. Louis.

Frontal and Ethmoidal Sinusitis: Operative Technic.
CORNELIUS G. COAKLEY, New York.
Discussion to be opened by JOHN A. PRATT, Minneapolis.

Operations of the Accessory Sinuses (Lantern and Moving Picture Demonstration).
ROBERT C. LYNCH, New Orleans.
Discussion to be opened by JOSEPH C. BECK, Chicago.

Intranasal and External Methods of Operating on the Ethmoid Cells: A Critical Consideration.
ROSS H. SKILLERN, Philadelphia.
Discussion to be opened by JOHN F. BARNHILL, Indianapolis.

Electrocoagulation and Radiation in the Treatment of Malignant Diseases of Ear, Nose and Throat (Lantern Demonstration). G. E. PFAHLER, Philadelphia.
Discussion to be opened by WILLIAM L. CLARK, Philadelphia, and G. ALLEN ROBINSON, New York.

Thursday, May 28—9 a. m.

Hematemesis.
CHEVALIER JACKSON, GABRIEL TUCKER, LOUIS H. CLERF, ROBERT M. LUKENS and WILLIAM F. MOORE, Philadelphia.
Discussion to be opened by HARRIS P. MOSHER, Boston; S. SOLIS COHEN and E. J. G. BEARDSLEY, Philadelphia; H. B. ORTON, Newark, N. J.; ELLEN J. PATTERSON, Pittsburgh, and WILLIAM B. CHAMBERLIN, Cleveland.

Pharyngo-Esophageal Diverticula: Diagnosis and Preoperative Management (Lantern Demonstration).
PORTER P. VINSON, Rochester, Minn.
Discussion to be opened by LAFAYETTE F. PAGE, Indianapolis.

The Cerebrospinal Fluid as an Index of Otorhinogenic Intracranial Complications. C. F. YERGER, Chicago.
Discussion to be opened by WELLS P. EAGLETON, Newark, N. J.

Papilledema of Otitic Origin. LEON E. WHITE, Boston.
Discussion to be opened by GEORGE M. COATES, Philadelphia.

Anastomosis of the Facial and Spinal Accessory Nerves.
A. W. ADSON, Rochester, Minn.
Discussion to be opened by H. I. LILLIE and B. E. HEMPSTEAD, Rochester, Minn.

Infection of Tonsilloglottic Region Associated with Cervical Cellulitis: Ten Cases with Four Deaths.
VIRGINIUS DABNEY, Washington, D. C.
Discussion to be opened by OTTO GLOGAU, New York.

A Possible Means for the Prevention of Deep Cervical Abscess Following the Removal of the Tonsils Under Local Anesthesia (Lantern Demonstration).
WILLIAM B. CHAMBERLIN, Cleveland.
Discussion to be opened by GEORGE F. KEIPER, Lafayette, Ind.

Friday, May 29—9 a. m.

Election of Officers

Exhibition of New Instruments and Appliances

Reports of Committees

Necrology.
EMIL MAYER, New York, Chairman; T. J. HARRIS, New York; WILLIAM B. CHAMBERLIN, Cleveland.

Lye Legislation.
CHEVALIER JACKSON, Philadelphia, Chairman; CHARLES A. THIGPEN, Montgomery, Ala.; JOHN J. MCLOONE, Phoenix, Ariz.; THERON EARLE FULLER, Texarkana, Ark.; CULLEN F. WELTY, San Francisco; CHESTER H. BOWERS, Los Angeles; THOMAS E. CARMODY, Denver; E. TERRY SMITH, Hartford, Conn.; CHARLES W. RICHARDSON, Washington, D. C.; J. A. ELLEGOOD, Wilmington, Del.; H. MARSHALL TAYLOR, Jacksonville, Fla.; DUNBAR ROY, Atlanta, Ga.; FRANZ H. BRANDT, Los Angeles; AUSTIN A. HAYDEN, Chicago; J. F. BARNHILL, Indianapolis; LEE W. DEAN, Iowa

City; ERNEST M. SEYDELL, Wichita, Kan.; J. A. STUCKY, Lexington, Ky.; ROBERT C. LYNCH, New Orleans; OWEN SMITH, Portland, Maine; M. M. SAVAGE, Baltimore; FRANCIS P. EMERSON, Boston; BURT R. SHURLY, Detroit; HORACE NEWHART, Minneapolis; E. F. HOWARD, Vicksburg, Miss.; M. F. ARBUCKLE, H. W. LOEB and GREENFIELD SLUDER, St. Louis; J. ALEXANDER DONOVAN, Butte, Mont.; WILLIAM P. WHERRY, Omaha; J. ANDRE FULLER, Reno, Nev.; F. E. KITTREDGE, Nashua, N. H.; WELLS P. EAGLETON and H. B. ORTON, Newark, N. J.; E. C. MATTHEWS, Albuquerque, N. M.; H. H. FORBES and C. J. IMPERATORI, New York; THOMAS H. HALSTED, Syracuse, N. Y., H. H. BRIGGS, Asheville, N. C.; L. A. SCHIPFER, Bismarck, N. D.; WILLIAM B. CHAMBERLIN, Cleveland; SAMUEL IGLAUER, Cincinnati; RALPH A. FENTON, Portland, Ore.; ELLEN J. PATTERSON, Pittsburgh; JAMES W. LEECH, Providence, R. I.; J. W. JERVEY, Greenville, S. C.; J. B. GREGG, Sioux Falls, S. D.; RICHMOND McKINNEY, Memphis, Tenn.; JOHN O. McREYNOLDS, Dallas, Texas; JOHN C. ROBISON, Salt Lake City; EDMUND T. BROWN, Burlington, Vt.; C. M. MILLER, Richmond, Va.; E. FRANK CHASE, Seattle; T. W. MOORE, Huntington, W. Va.; N. M. BLACK, Milwaukee; GEORGE L. STRADER, Cheyenne, Wyo.

Examining Board in Otolaryngology.
JOSEPH C. BECK, Chicago, Chairman; ROBERT C. LYNCH, New Orleans.

Otorhinologic Hygiene of Swimming.
H. M. TAYLOR, Jacksonville, Fla., Chairman; RALPH A. FENTON, Portland, Ore.; HILL HASTINGS, Los Angeles; M. F. ARBUCKLE, St. Louis; LEE M. HURD, New York.

Education of the Deaf Child.
C. W. RICHARDSON, Washington, D. C., Chairman; ELMER E. KENYON, Chicago; M. A. GOLDSTEIN, St. Louis.

Local Immunization of Tissues in the Nose, Throat and Ear by Bacterial Vaccines (Lantern Demonstration).
HAROLD M. HAYS, New York.
Discussion to be opened by THOMAS S. WINSLOW, New York.

Allergy as Related to Otolaryngology (Lantern Demonstration). GEORGE PINESS, Los Angeles.
Discussion to be opened by ANDREW A. EGGSTON, New York.

Hydrorrhea Rhinalis and Allied Neuroses, Considered Especially with Reference to the Parasympathetic Nervous System. WALTER A. WELLS, Washington, D. C.
Discussion to be opened by JOSEPH D. HEITGER, Louisville, Ky.

The Relation of Intranasal Disease in the Production of Bronchial Asthma: Report of Cases.
MARK J. GOTTLIER, New York.
Discussion to be opened by GREENFIELD SLUDER, St. Louis, and GRANT SELFRIDGE, San Francisco.

An Endocrine Factor in Otosclerosis (Lantern Demonstration). DANA W. DRURY, Boston.
Discussion to be opened by J. A. STUCKY, Lexington, Ky.

SECTION ON DISEASES OF CHILDREN

MEETS IN VERNON HALL IN HADDON HALL

OFFICERS OF SECTION

Chairman—EDGAR J. HUENEKENS, Minneapolis.

Vice Chairman—PHILIP F. BARBOUR, Louisville, Ky.

Secretary—HUGH McCULLOCH, St. Louis.

Executive Committee—BORDEN S. VEEDER, St. Louis; HENRY F. HELMHOLZ, Rochester, Minn.; EDGAR J. HUENEKENS, Minneapolis.

Wednesday, May 27—2 p. m.

Chairman's Address (Lantern Demonstration).
EDGAR J. HUENEKENS, Minneapolis.

Treatment of Whooping Cough by Roentgen Ray (Eight Hundred Cases). LAWRENCE W. SMITH, Boston.

Value of Spinal Drainage in the Treatment of Acute Poliomyelitis (Lantern Demonstration).
J. C. MONTGOMERY and W. C. C. COLE, Detroit.

Neonatal Pyelitis (Lantern Demonstration).
LOUIS W. SAUER, Evanston, Ill.

Observations During the Last Ten Years on Pneumonia (Lantern Demonstration).
RUDOLPH D. MOFFETT, New York.

Thursday, May 28—2 p. m.

Ketogenic Diet in Epilepsy (Lantern Demonstration).
M. G. PETERMAN, Rochester, Minn.

Treatment of Intracranial Hemorrhage in the New-Born.
CLIFFORD G. GRULEE, Chicago.

Incidence of Thyroid Enlargement in Eleven Thousand Children of School Age.
L. H. GOLDBERGER, New York.

Study of the Spinal Fluid in Negro New-Born Children.
M. HINES ROBERTS, Atlanta, Ga.

Friday, May 29—2 p. m.

Election of Officers

Prevention of Rickets (Lantern Demonstration).
MARTHA M. ELIOT, New Haven, Conn.

Methods of Teaching Posture (Lantern Demonstration).
ARMIN KLEIN, Boston.

Blood Phosphorus in the New-Born: Seasonal Variation, and Its Relation to Rickets.
EDWIN A. RIESENFELD, New York.

Are Perthes' Disease, Köhler's Disease, Schlatter's Disease and Scheuermann's Disease and Similar Conditions Different Manifestations of One and the Same Process? (Lantern Demonstration).
HENRY J. GERSTENBERGER, Cleveland.

A Method for Eliminating the Etiologic Organisms in Treating Endocarditis. MEYER SOLIS COHEN, Philadelphia.

Static Peritonitis in Athreptic Children.
JOHN A. FOOTE, Washington, D. C.

SECTION ON PHARMACOLOGY AND THERAPEUTICS

MEETS IN GOLD ROOM, HOTEL CHALFONTE

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Chairman—PAUL D. WHITE, Boston.

Vice Chairman—FRANKLIN C. McLEAN, Chicago.

Secretary—NORMAN M. KEITH, Rochester, Minn.

Executive Committee—CARY EGGLESTON, New York; PAUL J. HANZLIK, San Francisco; PAUL D. WHITE, Boston.

Wednesday, May 27—2 p. m.

SYMPOSIUM ON MEDICINE AND TREATMENT

The Therapeutic Value of Concentrated Scarlet Fever Antitoxin. GEORGE F. DICK, Chicago.

The Dick Test and Active Immunization with Scarlatinal Toxin: Further Results.
ABRAHAM ZINGHER, New York.
Discussion to be opened by WILLIAM H. PARK, New York.

Treatment of Amebiasis with Stovarsol (Oxyaminophenylarsenic Acid) Administered Orally.
FOSTER M. JOHNS and S. CHAILLE JAMISON, New Orleans.

The Pharmacology, Toxicology and Therapeutic Use of Carbon Tetrachlorid. PAUL D. LAMSON, Baltimore.
Discussion to be opened by W. G. SMILLIE, Andalusia, Ala.

Etiology of Chronic Ulcerative Colitis: Further Studies with Results of Specific Therapy (Lantern Demonstration).
J. A. BARGEN, Rochester, Minn.

Blood Coagulation and Its Control.
C. A. MILLS, Cincinnati.

Thursday, May 28—2 p. m.

Chairman's Address: Therapeutic Investigation.
PAUL D. WHITE, Boston.

Lesions of the Extremities Associated with Diabetes Mellitus (Lantern Demonstration).
FREDERICK A. COLLER, Ann Arbor, Mich.

The Use of Alcohol in Medical Practice.
ROGER I. LEE, Boston.

The Chemotherapy of New Pentavalent Organic Compounds of Arsenic (Lantern Demonstration).
G. W. RAIZISS, Philadelphia.

Heliotherapy, with Especial Reference to Spinal Tuberculosis. CHARLES E. SEVIER, Colorado Springs, Colo.
Discussion to be opened by G. B. WEBB, Colorado Springs, Colo.

Friday, May 29—2 p. m.

Election of Officers

Report on Revision of Pharmacopeia (Lantern Demonstration). ROBERT A. HATCHER, New York.

Disturbances of Vision Due to Digitalis.
HOWARD B. SPRAGUE, Boston.

Changes in Red Cell Volume in Nephritis.
JAMES W. SHERRILL, LaJolla, Calif.

The Diuretic Action of Acid-Producing Salts.
J. L. GAMBLE, Boston.

The Therapeutic Use of Novasurol in Ascites and Edema (Lantern Demonstration).
L. G. ROWNTREE and N. M. KEITH, Rochester, Minn., and C. W. BARRIER, Fort Worth, Texas.

SECTION ON PATHOLOGY AND PHYSIOLOGY

MEETS IN GOLD ROOM, HOTEL CHALFONTE

OFFICERS OF SECTION

Chairman—CHARLES W. GREENE, Columbia, Mo.

Vice Chairman—HARRY J. CORPER, Denver.

Secretary—JOSIAH J. MOORE, Chicago.

Executive Committee—ARNO BENEDICT LUCKHARDT, Chicago; KENNETH M. LYNCH, Dallas, Texas; CHARLES W. GREENE, Columbia, Mo.

Wednesday, May 27—9 a. m.

Chairman's Address: The Physiology of Oxygen Availability in Health and Disease.
CHARLES W. GREENE, Columbia, Mo.

Experimental Study of the Healing of Arteries After Different Methods of Ligation (Lantern Demonstration).
J. S. HORSLEY, JR., Richmond, Va.
Discussion to be opened by RUDOLPH MATAS, New Orleans, and BARNEY BROOKS, St. Louis.

The Phenomena Concerned with "Reactions" Following the Transfusion of Blood: Clinical and Experimental Investigations (Lantern Demonstration).
RALPH A. KORDENAT and FRANK SMITHIES, Chicago.
Discussion to be opened by JOHN A. KOLMER, Philadelphia, and F. W. HARTMAN, Detroit.

Puberty as a Factor in the Chemistry of Bone Growth (Lantern Demonstration). F. S. HAMMETT, Philadelphia.
Discussion to be opened by ALFRED F. HESS, New York, and R. G. HOSKINS, Columbus, Ohio.

The Specific Activation of Foods, Cholesterol and Phytosterol by Ultraviolet Irradiation (Lantern Demonstration).
ALFRED F. HESS, New York.

The Curve of Inorganic Blood Phosphates During Sugar Tolerance Test: Its Significance in Diagnosis and Prognosis (Lantern Demonstration).
F. W. HARTMAN and A. BOLLIGER, Detroit.
Discussion to be opened by ROGER R. HANNON, New York.

Studies of Quantitative Blood Sugar Estimation (Lantern Demonstration). THOMAS LUTHER BYRD, Milwaukee.
Discussion to be opened by V. P. SYDENSTRICKER, Augusta, Ga.

Regulation of Red Blood Cell Production (Lantern Demonstration). C. D. LEAKE, Madison, Wis.
Discussion to be opened by ALFRED STENGEL, Philadelphia, and WILLIAM THALHIMER, Milwaukee.

Thursday, May 28—2 p. m.

JOINT MEETING OF SECTIONS ON PATHOLOGY AND PHYSIOLOGY AND ON GASTRO-ENTEROLOGY AND PROCTOLOGY

SYMPOSIUM ON LIVER FUNCTION

MEETS IN NEW HALL IN HADDON HALL

Physiology of the Liver: Present Status of Our Knowledge.
A. J. CARLSON, Chicago.

Liver and Its Relation to Pigment Metabolism (Lantern Demonstration). GEORGE H. WHIPPLE, Rochester, N. Y.

Modified Physiologic Processes Following Total Removal of the Liver (Lantern Demonstration).
F. C. MANN, Rochester, Minn.

Methods of Determining the Functional Capacity of the Liver (Lantern Demonstration).
CARL H. GREENE, Rochester, Minn.

Pathologic Physiology of the Liver in Relation to Intoxication and Infection. EUGENE L. OPIE, Philadelphia.

Studies on Evaluation and Effect of Treatment (Lantern Demonstration). CHARLES W. MCCLURE, Boston.

Nonsurgical Drainage of the Biliary Tract: Therapeutic Value (Lantern Demonstration).
B. B. VINCENT LYON and WILLIAM A. SWALM, Philadelphia.
Discussion on Papers of DRS. CARLSON, WHIPPLE, MANN, GREENE, OPIE, MCCLURE, LYON and SWALM to be opened by L. G. ROWNTREE, Rochester, Minn.; WILLIAM J. KERR, San Francisco; FRANKLIN W. WHITE, Boston; MARTIN J. SYNNOTT, Montclair, N. J., and J. QUINCY THOMAS, Norristown, Pa.

Friday, May 29—9 a. m.

Election of Officers

Typing of Albumin Excretion (Lantern Demonstration).
WILLIAM G. EXTON, New York.
Discussion to be opened by JOHN A. KOLMER, Philadelphia; H. O. MOSENTHAL, New York; L. G. ROWNTREE, Rochester, Minn., and W. G. LYLE, New York.

Seminal Vesicles from Syphilitic Human Individuals: Histologic Study (Lantern Demonstration).
E. R. SALEEBY, Philadelphia.
Discussion to be opened by JOHN A. KOLMER, Philadelphia.

Pathologic Changes in Lung from Use of Mercurochrome-220 Soluble (Lantern Demonstration).
H. J. CORPER, Denver.
Discussion to be opened by JOHN A. KOLMER, Philadelphia.

The Comparative Action of Electrothermic Coagulation and Intratumoral Insertion of Glass Capillaries of Radium Emanation on Malignant Tumors (Lantern Demonstration). ISAAC LEVIN, New York.
Discussion to be opened by GEORGE E. PFAHLER, Philadelphia.

Epithelioma and Crural Ulcers (Lantern Demonstration).
LEILA CHARLTON KNOX, New York.

Cancer Immunity (Lantern Demonstration).
FRANCIS CARTER WOOD, New York.
Discussion on Papers of DRS. KNOX and WOOD to be opened by JAMES EWING and JAMES B. MURPHY, New York.

Quantitative Determination of Intestinal Putrefaction (Lantern Demonstration). CARL P. SHERWIN, New York.
Discussion to be opened by W. H. FOREMAN, Indianapolis, and ANTHONY J. BASSLER and A. I. RINGER, New York.

Variations of the Intestinal Rate (Lantern Demonstration).
FRANCIS LOWELL BURNETT, Boston.
Discussion to be opened by WALTER C. ALVAREZ and DAVID FRIEDLANDER, San Francisco.

SECTION ON STOMATOLOGY

MEETS IN CRYSTAL ROOM, HOTEL BREAKERS

OFFICERS OF SECTION

Chairman—CARL W. WALDRON, Minneapolis.

Vice Chairman—JOSEPH D. EBY, New York.

Secretary—HERBERT A. POTTS, Chicago.

Executive Committee—ROBERT H. IVY, Philadelphia; JOSEPH A. PETTIT, Portland, Ore.; CARL W. WALDRON, Minneapolis.

Wednesday, May 27—9 a. m.

Chairman's Address. CARL W. WALDRON, Minneapolis.

Relief for the Pain in Carcinoma of the Face (Lantern Demonstration). F. C. GRANT, Philadelphia.
Discussion to be opened by GEORGE E. PFAHLER and HENRY K. PANCOAST, Philadelphia.

Diathermy in Stomatology. BUDD C. CORBUS, Chicago.
Discussion to be opened by GEORGE A. WYETH, New York, and WILLIAM L. CLARK, Philadelphia.

Arthroplasty of the Temporomaxillary Joint (Lantern Demonstration). FULTON RISDON, Toronto, Canada.
Discussion to be opened by JOSEPH D. EBY, New York, and LEROY M. S. MINER, Boston.

Thursday, May 28—9 a. m.

Osteomyelitis of the Mandible (Lantern Demonstration).
JAMES R. CAMERON, Philadelphia.
Discussion to be opened by ROBERT H. IVY, Philadelphia, and HENRY S. DUNNING, New York.

Influence of the Focal Infections on the System, with Especial Reference to Nervous Conditions.
D. J. MCCARTHY, Philadelphia.
Discussion to be opened by FREDERICK B. MOOREHEAD, Chicago.

Oral and Ocular Relations: Some Correlated Findings.
WILL WALTER, Chicago.
Discussion to be opened by CASSIUS D. WESCOTT, Chicago, and WESTON A. PRICE, Cleveland.

Stones of the Salivary Glands and Ducts (Lantern Demonstration). G. R. HARRISON, Richmond, Va.
Discussion to be opened by ARTHUR D. BLACK, Chicago.

Friday, May 29—9 a. m.

Election of Officers

Surgery of the Supra-Orbital Region.
LUCIUS W. JOHNSON, Washington, D. C.
Discussion to be opened by VILRAY P. BLAIR, St. Louis.

Relationship of Injury to a Tumor of the Parotid Region (Lantern Demonstration).
EDWARD H. HATTON, Chicago.
Discussion to be opened by M. I. SCHAMBERG, New York.

An Unusual Palatal Tumor (Lantern Demonstration).
G. V. BOYKO, Passaic, N. J.
Discussion to be opened by GEORGE M. DORRANCE, Philadelphia.

SECTION ON NERVOUS AND MENTAL DISEASES

MEETS IN NEW HALL IN HOTEL CHALFONTE

OFFICERS OF SECTION

Chairman—EDWIN G. ZABRISKIE, New York.

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Secretary—LEWIS J. POLLOCK, Chicago.

Executive Committee—WALTER TIMME, New York; WALTER F. SCHALLER, San Francisco; EDWIN G. ZABRISKIE, New York.

Wednesday, May 27—2 p. m.

Chairman's Address. EDWIN G. ZABRISKIE, New York.

Tonic Neck Reflexes in Tuberculous Meningitis (Lantern Demonstration). I. S. WECHSLER, New York.

Meralgia Paresthetica. CHARLES ROSENHECK, New York.

Parkinsonian States: Clinical and Histopathologic Studies (Lantern Demonstration).
G. B. HASSIN and PETER BASSOE, Chicago.

Dercum's Disease: A Cliniopathologic Study.
JOHN L. ECKEL, Buffalo, and N. W. WINKELMAN, Philadelphia.

The Diagnosis of Basilar Cerebral Hemorrhage.
MAURICE PACKARD, New York.

Thursday, May 28—2 p. m.

Flaccid Paraplegia (Lantern Demonstration).
EDWARD LIVINGSTON HUNT, New York.

Interpretation of Ventriculograms by Study of Casts of the Cerebral Subarachnoid Spaces (Lantern Demonstration). C. E. LOCKE, Cleveland.

Accomplishments of Surgery in Lesions of the Pituitary Body, Based on a Review of One Hundred Cases of Pituitary Disorder (Lantern Demonstration).
CHARLES H. FRAZIER, Philadelphia.

Pituitary Neoplasms: Medical Treatment (Lantern Demonstration). IRVING H. PARDEE, New York.

Experimental Choked Disk (Lantern Demonstration).
LOYAL E. DAVIS, Chicago.

The Relation of the Calcium Content of the Spinal Fluid to Postlumbar Puncture Headache (Lantern Demonstration).
MARCUS NEUSTAEDTER and W. W. HALA, New York.

Friday, May 29—2 p. m.

Election of Officers

The Radical Cure of Neuroticism in Children.
TOM A. WILLIAMS, Washington, D. C.

Underestimation of Good Results in Mental Diseases: Facts in One Thousand and Twenty-Four Cases.
EARL D. BOND, Philadelphia.

The Psychiatric Clinic in the General Hospital.
IRVING J. SANDS, Brooklyn.

Tryparsamide Treatment: Final Report.
HARRY A. SOLOMON and HENRY R. VIETS, Boston.

Alteration of Character, Disposition and Behavior as a Sequel of Epidemic (Lethargic) Encephalitis.
ALFRED GORDON, Philadelphia.

The Earlier Development of Paresis in Patients Treated with Arsenicals in the Primary and Secondary Stages of Syphilis. CHARLES E. KIELY, Cincinnati.

Epidemic (Lethargic) Encephalitis: 1. An Important Factor in Its Causation. 2. Its Prevention.
WILLIAM BROWNING, Brooklyn.

SECTION ON DERMATOLOGY AND SYPHILOLOGY

MEETS IN NEW HALL IN MORTON HOTEL

OFFICERS OF SECTION

Chairman—JOHN E. LANE, New Haven, Conn.

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Secretary—JAMES HERBERT MITCHELL, Chicago.

Executive Committee—MARCUS HAASE, Memphis, Tenn.; HAROLD N. COLE, Cleveland; JOHN E. LANE, New Haven, Conn.

Wednesday, May 27—2 p. m.

Chairman's Address. JOHN E. LANE, New Haven, Conn.

Syphilitic Elephantiasis of the Scrotum.
CLEMENT H. MARSHALL, Memphis, Tenn.

Routine Treatment of Syphilis at the Pennsylvania Hospital: Serologic and Clinical Results in One Thousand Cases.
FRANK CROZER KNOWLES and JOHN B. LUDY, Philadelphia, and HENRY B. DECKER, Audubon, N. J.

Effect of Treatment on a Thousand or More Spinal Fluids (Lantern Demonstration).
UDO J. WILE and HARTHER L. KEIM, Ann Arbor, Mich.

The Clinical Response and Management of the Tabetic (Lantern Demonstration).
JOHN H. STOKES and LOREN W. SHAFFER, Philadelphia.

Significance of the Negative Spinal Fluid in Neurosyphilis.
PAUL A. O'LEARY and MARQUE O. NELSON, Rochester, Minn.

Thursday, May 28—2 p. m.

Ulcus Vulvae Acutum. CLARK W. FINNERUD, Chicago.

Leukoplakia: Report of Fifty Cases.
HOWARD FOX, New York.

Recklinghausen's Disease Without Tumor Formation: Incomplete or Abortive Forms of the Affection (Lantern Demonstration).
FRED WISE and J. J. ELLER, New York.

Madura Foot (Mycetoma) of the Black Grain Variety in a Native American (Lantern Demonstration).
H. S. THATCHER, Cleveland.

Creeping Eruption (Lantern Demonstration).
J. LEE KIRBY-SMITH, Jacksonville, Fla., and G. H. WHITE and W. E. DOVE, United States Bureau of Entomology.
Discussion to be opened by J. B. SHELMIRE, Dallas, Texas.

Livedo Reticularis (Lantern Demonstration).
CHARLES M. WILLIAMS and HERMAN GOODMAN, New York.

Mycosis Fungoides: Its Relation to Lymphosarcoma and Leukemia (Lantern Demonstration).
J. FRANK FRASER, New York.

Friday, May 29—2 p. m.

Election of Officers

Arsenic in the Tissue in Arsenical Keratoses, and in Epithelioma Developing in Psoriatic Lesions Following the Administration of Arsenic: Microchemical Study.
EARL D. OSBORNE, Buffalo.

General Analysis of Sweat: Preliminary Report (Lantern Demonstration).
ROBERT E. BARNEY, Ann Arbor, Mich.

Heat and Cold Sensitiveness as a Cause of Dermatoses.
W. W. DUKE, Kansas City, Mo.

Cosmetics.
HIRAM E. MILLER and LAURENCE R. TAUSSIG, San Francisco.

Ultraviolet Radiation in the Prophylaxis and Treatment of Acute Roentgen-Ray and Radium Reactions.
GEORGE MILLER MACKEE and GEORGE C. ANDREWS, New York.

Treatment of Intra-Oral Cancer with Radium Emanation: Report of One Hundred and Forty-One Cases.
FRANK EDWARD SIMPSON, Chicago.

The Cutaneous Neuroses, with Particular Reference to Treatment with Psychotherapy.
JOSEPH V. KLAUDER, Philadelphia.

Xanthoma Tuberosum cum Erythema Telangiectodes (Lantern Demonstration).
SIGMUND S. GREENBAUM, Philadelphia.

SECTION ON PREVENTIVE AND INDUSTRIAL MEDICINE AND PUBLIC HEALTH

MEETS IN NEW HALL IN HADDON HALL

OFFICERS OF SECTION

Chairman—OSCAR DOWLING, Shreveport, La.

Vice Chairman—HERMAN N. BUNDESEN, Chicago.

Secretary—W. F. DRAPER, Washington, D. C.

Executive Committee—JOHN A. FERRELL, New York; W. S. LEATHERS, University, Miss.; OSCAR DOWLING, New Orleans.

Wednesday, May 27—9 a. m.

Meat Inspection as a Public Health Measure.
W. H. LIPMAN, Chicago.

The Correlation of Federal Health Agencies.
LINSLY R. WILLIAMS, New York.

Chairman's Address. OSCAR DOWLING, Shreveport, La.

The Uses of the Scarlet Fever Streptococcus Toxin and Antitoxin in the Diagnosis, Prevention and Cure of Scarlet Fever. W. H. PARK, New York.

Some Problems in State Public Health Administration.
MATTHIAS NICOLL, JR., Albany, N. Y.

A Typhoid Carrier Survey of the Dairy Industry in Alabama.
S. W. WELCH, Montgomery, Ala.

Thursday, May 28—9 a. m.

Plague: Past, Present and Future.
B. J. LLOYD, Washington, D. C.

Universalizing Breast Feeding in a Community.
FRANK HOWARD RICHARDSON, Brooklyn.

Problems of Current Interest in the Control of Communicable Diseases. LOUIS I. HARRIS, New York.

Epidemiologic Features of Typhoid Fever in Richmond, Va., 1907-1923 (Lantern Demonstration).
ALLEN W. FREEMAN, Baltimore.

Epidemiologic Methods (Lantern Demonstration).
DON M. GRISWOLD, Iowa City.

Health in Relation to Citizenship.
JOHN A. FERRELL, New York.

Friday, May 29—9 a. m.

Election of Officers

The Dog as a Carrier of Disease (Lantern Demonstration).
MINAS JOANNIDES, Minneapolis.

The Control of Foods Eaten Raw.
HERMAN N. BUNDESEN, Chicago.

Factory Ventilation and Industrial Wastes.
C. E. A. WINSLOW, New Haven, Conn.

Industrial Health Under Nonmedical Supervision.
E. R. HAYHURST, Columbus, Ohio.

Radium Necrosis? F. L. HOFFMAN, Newark, N. J.

The Trend of Cancer Mortality.
J. W. SCHERESCHEWSKY, Boston.

SECTION ON UROLOGY

MEETS IN NEW HALL IN MORTON HOTEL

OFFICERS OF SECTION

Chairman—JOHN T. GERAGHTY,* Baltimore.

Vice Chairman—ROBERT V. DAY, Los Angeles.

Secretary—GEORGE GILBERT SMITH, Boston.

Executive Committee—HENRY G. BUGBEE, New York; HERMAN L. KRETSCHMER, Chicago; JOHN T. GERAGHTY,* Baltimore.

Wednesday, May 27—9 a. m.

The Urologist and Clinical Diagnosis: The Findings in Four Hundred Cases Referred by Internists for Urinary Tract Study. P. A. ROHRER, Seattle.

Teaching of Urology to Interns.
WILLIAM C. QUINBY, Boston.

Autonephrectomy. LIONEL P. PLAYER, San Francisco.

Technic for Orchidectomy When Both Epididymis and Testis Are Involved. CHARLES S. VIVIAN, Phoenix, Ariz.

Thrombi and Emboli of the Renal Artery: Report of an Unusual Case (Lantern Demonstration).
CHARLES O. DELANEY, Winston-Salem, N. C.

Renal Function: Results of Experimental Work (Lantern Demonstration).
WILBUR H. HAINES and L. F. MILLIKEN, Philadelphia.

Hexylresorcinol in the Treatment of Urinary Tract Infections: Certain Clinical Aspects.
VEADER LEONARD, Baltimore.

Thursday, May 28—9 a. m.

Chairman's Address: Urologic Problems of the General Practitioner, Internist and Surgeon.
ROBERT V. DAY, Los Angeles.

SYMPOSIUM ON PROSTATECTOMY

Perineal Prostatectomy (Lantern Demonstration).
PARKER SYMS, New York.

A Device for Controlling Hemorrhage After Prostatectomy (Lantern Demonstration).
EDGAR G. BALLENGER and OMAR F. ELDER, Atlanta, Ga.

The Value of Transfusion in Surgery of the Prostate (Lantern Demonstration).
AUSTIN I. DODSON, Richmond, Va.

Some Causes of Poor Functional Results Following Prostatectomy (Lantern Demonstration).
ROBERT H. HERBST, Chicago.

An Operation for the Relief of Post-Prostatectomy Incontinence of Urine. E. L. KEYES, JR., New York.

Perirenal Sclerosis, Including a Report of Two Cases Occurring as a Sequel to Perinephritic Abscess.
VINCENT J. O'CONOR, Chicago.

Bladder Reflux (Lantern Demonstration).
DANIEL N. EISENDRATH, HARRY KATZ and J. M. GLASSER, Chicago.

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* Deceased

Friday, May 29—9 a. m.

Election of Officers

An Unusual Case of Cancer of the Bladder (Lantern Demonstration). J. DELLINGER BARNEY, Boston.

Vesical Diverticula. ARTHUR B. CECIL, Los Angeles.

Etiology of Incrusted Cystitis (Lantern Demonstration). B. H. HAGER, Madison, Wis.

Fifty Years of Progress in the Treatment of Gonorrhea. VICTOR G. VECKI, San Francisco.

Prostatitis of Nonvenereal Origin. THEODORE BAKER, Pittsburgh.

Lowered Fertility in the Male. DONALD MACOMBER, Boston.

Urinary Calculi: Their Chemical Composition and Structure in Relation to Radiography (Lantern Demonstration). DANIEL E. SHEA, Hartford, Conn.

Impacted Calculi of the Ureter, Their Treatment and Result (Lantern Demonstration). ALEXANDER HAMILTON PEACOCK, Seattle.

SECTION ON ORTHOPEDIC SURGERY

MEETS IN NEW HALL IN HOTEL CHALFONTE

OFFICERS OF SECTION

Chairman—F. J. GAENSLEN, Milwaukee.

Vice Chairman—ARTHUR BRUCE GILL, Philadelphia.

Secretary—JAMES ARCHER O'REILLY, St. Louis.

Executive Committee—WILLIS C. CAMPBELL, Memphis, Tenn.; HENRY B. THOMAS, Chicago; F. J. GAENSLEN, Milwaukee.

Wednesday, May 27—9 a. m.

Birth Injuries Requiring Orthopedic Treatments (Lantern Demonstration). SAMUEL W. BOORSTEIN, New York.
Discussion to be opened by J. T. RUGH, Philadelphia, and C. C. CHATTERTON, St. Paul.

Obstetric Paralysis: Report of Eleven Hundred Cases, with Discussion of the Etiology, Pathology, Treatment and Operative Results (Lantern Demonstration). JAMES WARREN SEVER, Boston.
Discussion to be opened by ARMITAGE WHITMAN, New York, and WALLACE H. COLE, St. Paul.

Osteomyelitis in the Innominate Bone. CHARLES F. PAINTER, Boston.
Discussion to be opened by MELVIN S. HENDERSON, Rochester, Minn., and H. WINNETT ORR, Lincoln, Neb.

End-Results in the Treatment of Knee Joint Tuberculosis at the New York Orthopedic Hospital. RUSSELL A. HIBBS, New York.
Discussion to be opened by CHARLES F. PAINTER and Z. B. ADAMS, Boston.

Ununited Fractures (Lantern Demonstration). MELVIN S. HENDERSON, Rochester, Minn.
Discussion to be opened by PHILIP D. WILSON, Boston, and RUSSELL A. HIBBS, New York.

Types of Colles' Fracture Based on Etiology (Lantern Demonstration). RALPH G. CAROTHERS, Cincinnati.
Discussion to be opened by ALEXANDER R. COLVIN, St. Paul, and M. L. KLINEFELTER, St. Louis.

Relationship of Calcium and Phosphorus Metabolism to Normal and Abnormal Bone Changes: Preliminary Report.
PHILIP H. KREUSCHER, LLOYD ARNOLD and WILLIAM C. AUSTIN, Chicago.
Discussion to be opened by EMIL S. GEIST, Minneapolis, and W. W. PLUMMER, Buffalo.

Thursday, May 28—9 a. m.

Spinal Lesions in Adults (Lantern Demonstration). JAMES A. DICKSON, Cleveland.
Discussion to be opened by GEORGE F. HAWLEY, Bridgeport, Conn., and CHARLES W. PAINTER, Boston.

Treatment of Lateral Curvature of the Spine by Means of a Turnbuckle Jacket (Lantern Demonstration). A. H. BREWSTER, Boston.
Discussion to be opened by DEFOREST P. WILLARD, Philadelphia; JAMES W. SEVER, Boston, and ALBERT H. FREIBERG, Cincinnati.

Chairman's Address: The Care of the Cripple. F. J. GAENSLEN, Milwaukee.

The End-Results of Operation for the Correction of Drop Foot (Lantern Demonstration). WILLIS C. CAMPBELL, Memphis, Tenn.
Discussion to be opened by MELVIN S. HENDERSON, Rochester, Minn.

Attenuated Bone Infections (Lantern Demonstration). WALTER M. BRICKNER, New York.
Discussion to be opened by WALTER G. STERN, Cleveland, and S. FOSDICK JONES, Denver.

Chronic Osteomyelitis of Long Bones—Treatment by Resection (Lantern Demonstration). GEORGE I. BAUMAN, Cleveland.
Discussion to be opened by H. WINNETT ORR, Lincoln, Neb., and FREDERICK C. KIDNER, Detroit.

Diathermy in Joint Injuries. F. H. EWERHARDT, St. Louis.
Discussion to be opened by WALLACE H. COLE, St. Paul.

Friday, May 29—9 a. m.

Election of Officers

Neuro-Arthropathies of Peripheral Nerve Injury Origin: Report of Two Cases (Lantern Demonstration). HERMAN B. PHILIPS, New York.
Discussion to be opened by HENRY W. FRAUENTHAL and REGINALD H. SAYRE, New York, and A. W. ADSON, Rochester, Minn.

End-Results on Arthrodesis of the Sacro-Iliac Joint in Tuberculous Cases (Lantern Demonstration). M. N. SMITH-PETERSEN, Boston.
Discussion to be opened by WILLIS C. CAMPBELL, Memphis, Tenn., and MELVIN S. HENDERSON, Rochester, Minn.

Mechanics of Back Strain (Lantern Demonstration). Z. B. ADAMS, Boston.
Discussion to be opened by PAUL B. MAGNUSON, Chicago, and WILLIAM S. BAER, Baltimore.

An Operation for the Relief of Morton's Toe (Lantern Demonstration). JOHN DUNLOP, Los Angeles.
Discussion to be opened by ALBERT H. FREIBERG, Cincinnati, and Z. B. ADAMS, Boston.

Reconstruction of the Hip Joint. FRED H. ALBEE, New York.
Discussion to be opened by WILLIS C. CAMPBELL, Memphis, Tenn., and M. N. SMITH-PETERSEN, Boston.

Hemangiomas of the Knee Joint (Lantern Demonstration). JOHN T. O'FERRALL, New Orleans.
Discussion to be opened by COMPTON RIELY, Baltimore.

SECTION ON GASTRO-ENTEROLOGY AND PROCTOLOGY

MEETS IN NEW HALL IN HADDON HALL

OFFICERS OF SECTION

Chairman—RALPH W. JACKSON, Fall River, Mass.

Vice Chairman—SIDNEY K. SIMON, New Orleans.

Secretary—FRANK SMITHIES, Chicago.

Executive Committee—J. RAWSON PENNINGTON, Chicago; FRANKLIN W. WHITE, Boston; RALPH W. JACKSON, Fall River, Mass.

Wednesday, May 27—2 p. m.

Chairman's Address: The Correlation of Proctology with Other Specialties. R. W. JACKSON, Fall River, Mass.

Stool Examinations for Protozoa in Eleven Hundred Inmates of a New York State Institution (Lantern Demonstration).
W. S. THOMAS and E. A. BAUMGARTNER, Clifton Springs, N. Y.

Hydrogen Ion Concentration of Stools: Its Estimation and Clinical Value (Lantern Demonstration). W. H. FOREMAN, Indianapolis.

The Significance of Abdominal Pain: A Clinical Research. ERNEST H. GAITHER, Baltimore.

The Digestive Tract and Endocrine Function.
B. C. LOCKWOOD, Detroit.

Perforated Peptic Ulcer of the Stomach and the Duodenum: Early Diagnosis by a New Method (Roentgen-Ray Visualization of Spontaneous Pneumoperitoneum).
WILLIAM A. BRAMS and R. T. VAUGHAN, Chicago.

The Healing of Peptic Ulcer (Lantern Demonstration).
FREDERICK A. SPEIK, Los Angeles.

Thursday, May 28—2 p. m.

JOINT MEETING OF SECTIONS ON PATHOLOGY AND PHYSIOLOGY AND ON GASTRO-ENTEROLOGY AND PROCTOLOGY

SYMPOSIUM ON LIVER FUNCTION

Physiology of the Liver: Present Status of Our Knowledge.
A. J. CARLSON, Chicago.

Liver and Its Relation to Pigment Metabolism (Lantern Demonstration).
GEORGE H. WHIPPLE, Rochester, N. Y.

Modified Physiologic Processes Following Total Removal of the Liver (Lantern Demonstration).
F. C. MANN, Rochester, Minn.

Methods of Determining the Functional Capacity of the Liver (Lantern Demonstration).
CARL H. GREENE, Rochester, Minn.

Pathologic Physiology of the Liver in Relation to Intoxication and Infection. EUGENE L. OPIE, Philadelphia.

Studies on Evaluation and Effect of Treatment (Lantern Demonstration). CHARLES W. MCCLURE, Boston.

Nonsurgical Drainage of the Biliary Tract: Therapeutic Value (Lantern Demonstration).
B. B. VINCENT LYON and WILLIAM A. SWALM, Philadelphia.

Discussion on Papers of DRS. CARLSON, WHIPPLE, MANN, GREENE, OPIE, MCCLURE, LYON and SWALM to be opened by L. G. ROWNTREE, Rochester, Minn.; WILLIAM J. KERR, San Francisco; FRANLIN W. WHITE, Boston; MARTIN J. SYNNOTT, Montclair, N. J., and J. QUINCY THOMAS, Norristown, Pa.

Friday, May 29—2 p. m.

Election of Officers

The Causes of Gastric Secretion: The Mechanism Concerned and Its Practical Significance (Lantern Demonstration). A. C. IVY, Chicago.

Gastric Excretion of Neutral Red: Clinical and Experimental Data (Lantern Demonstration).
PERCY B. DAVIDSON and EDOUARD WILLOCX, Boston.

Normal Gastric Digestion.
MARTIN E. REHFUSS, Philadelphia.

The Differential Diagnosis Between Cancer and Other Gastric Conditions When Associated with Subacidity.
SEYMOUR BASCH, New York.

The Surgical Treatment of Gastric and Duodenal Ulcers by the Oblique Gastroduodenostomy (Lantern Demonstration). A. L. SORESI, New York.

The Relationship of Tuberculosis to Fistula in Ano.
W. A. FANSLER, Minneapolis.

Some Reasons for Poor Results Following Gastro-Intestinal Surgery. RUSSELL BOLES, Philadelphia.

SECTION ON MISCELLANEOUS TOPICS

MEETS IN CRYSTAL ROOM, HOTEL BREAKERS

OFFICERS OF MEETINGS ON RADIOLOGY

Chairman—PRESTON M. HICKEY, Ann Arbor, Mich.
Vice Chairman—RUSSELL D. CARMAN, Rochester, Minn.
Secretary—M. J. HUBENY, Chicago.

Wednesday, May 27—2 p. m.

Chairman's Address. PRESTON M. HICKEY, Ann Arbor, Mich.

Problem of Malignancy.
A. E. BARCLAY, Manchester, England.
Discussion to be opened by A. W. CRANE, Kalamazoo, Mich.

SYMPOSIUM ON GASTRIC, DUODENAL AND JEJUNAL PEPTIC ULCER

The Roentgenologic Diagnosis of Peptic Ulcer (Lantern Demonstration).
RUSSELL D. CARMAN, Rochester, Minn.

Gastric and Duodenal Roentgen-Ray Findings After Operation (Lantern Demonstration).
JAMES T. CASE, Battle Creek, Mich.

Peptic Ulcer from the Internist's Standpoint.
LEWELLYS F. BARKER, Baltimore.

Peptic Ulcer from the Surgeon's Standpoint.
HUGH CABOT, Ann Arbor, Mich.

The Pathology of Peptic Ulcer.
HOWARD T. KARSNER, Cleveland.
Discussion on Papers of DRS. CARMAN, CASE, BARKER, CABOT and KARSNER to be opened by L. G. COLE, New York.

Thursday, May 28—2 p. m.

A Radiologic Retrospect. ALBERT SOILAND, Los Angeles.
Discussion to be opened by GEORGE E. PFAHLER, Philadelphia.

The Control of Nonmalignant Uterine Hemorrhage by Radiation (Lantern Demonstration).
WILLIAM S. NEWCOMET, Philadelphia.
Discussion to be opened by JOHN H. GIRVIN, GEORGE M. LAWS and COLLIN FOULKROD, Philadelphia.

The Results of Radium Therapy for Recurrent Carcinoma of the Breast (Lantern Demonstration).
BURTON J. LEE, New York.
Discussion to be opened by HARRY K. PANCOAST, Philadelphia.

Roentgen-Ray Diagnosis and Treatment of Thymoma (Lantern Demonstration).
T. A. GROOVER, A. C. CHRISTIE and E. A. MERRITT, Washington, D. C.
Discussion to be opened by HARRY K. PANCOAST, Philadelphia.

Immediate Metabolic Effects Following Deep Roentgen-Ray Therapy (Lantern Demonstration).
HOWARD P. DOUB, Detroit.
Discussion to be opened by EUGENE P. PENDERGRASS, Philadelphia.

The Roentgen Ray in the Treatment of Local Inflammations, Cellulitis and Carbuncles.
FRED M. HODGES, Richmond, Va.
Discussion to be opened by ROSS GOLDEN, New York, and I. S. TROSTLER, Chicago.

Thymus and the Treatment of Its Hyperfunction: Clinical and Roentgenologic Consideration.
LAWRENCE R. DE BUYS and ERNEST C. SAMUELS, New Orleans.

Friday, May 29—2 p. m.

The Roentgen-Ray Examination of Sinuses and Mastoids in Children (Lantern Demonstration).
E. H. SKINNER, Kansas City, Mo.
Discussion to be opened by BUNDY ALLEN, Iowa City.

Roentgen-Ray Treatment in Bronchial Asthma and Chronic Bronchitis. ISAAC GERBER, Providence, R. I.
Discussion to be opened by SAMUEL STERN, New York.

Kidney Stone as a Diagnostic Problem (Lantern Demonstration). B. H. NICHOLS, Cleveland.
Discussion to be opened by DANIEL EISENDRATH, Chicago.

Manipulative Dislocations of the Atlas (Lantern Demonstration). EDWARD S. BLAINE, Chicago.
Discussion to be opened by BYRON C. DARLING, New York.

The Sella Turcica and the Significance of Changes in Its Roentgenographic Appearance (Lantern Demonstration). JOHN D. CAMP, Boston.
Discussion to be opened by L. T. LEWALD, New York.

Antiperistalsis in the Duodenum: Further Observations (Lantern Demonstration).
W. F. HENDERSON, Jackson, Miss.
Discussion to be opened by L. A. FORTIER, New Orleans.

Deep Roentgen-Ray Exposure as an Aid in the Differential Diagnosis of Mediastinal Tumors (Lantern Demonstration). WILLIAM A. EVANS, Detroit.
Discussion to be opened by E. C. ERNST, St. Louis.

The Technical Exhibits

A Typical View of Exhibit Hall

Those who attended the Chicago Convention last year will perhaps always remember with a thrill their feeling on entering the great hall devoted to technical exhibits. Here in one orderly arrangement were row after row of displays showing the handiwork of American science and industry in creating those things needed by the physician in combating disease. It might well have been called the "American Medical Exposition."

This year at Atlantic City, the technical exhibits will again be housed in a spacious pier building—the new Steel Pier. Thirty-three thousand square feet of space will be utilized and 140 firms will particpiate. The arrangement will be such that the exhibit of any particular firm may readily be singled out or all of the exhibits may be viewed with ease and pleasure by passing along the well laid out aisles.

Each year physicians are realizing more clearly that exhibitors are present not as mere salesmen but as men who have a genuine service to offer to members of the profession.

The physician is urged therefore to take full advantage of the exhibits. The mountain could not be moved to Mahomet. Neither would it be a physical possibility to bring to the individual physician all of the vast armamentarium that industry creates for his use. But, in the Exhibit Hall he can actually see, pick up in his own hands and leaf through practically the entire line of medical and surgical books of the great medical publishing houses of the United States. Here he can view x-ray and electrotherapeutic equipment in all the various styles made by leading manufacturers. Here he can look over the pharmaceutical and biological lines of the great producers and gain intimate, detailed information as to the manufacture of the various products. Here he can casually inspect or study at length displays of practically every instrument or apparatus used by the physican and surgeon. Here he can gain information as to the various foods and dietetic products that fill an important place in promoting the health interests of his patient. Truly, the exhibits will be a most stimulating feature of the Convention.

Exhibit Hall will be open daily from 8 a. m. to 6 p. m., beginning Monday morning and closing Friday at noon. As the scientific sections do not convene until Wednesday afternoon, visiting physicians will have good opportunity to inspect carefully all of the various manufacturers' and dealers' displays. The Exhibit Hall will be a convenient place to meet other physicians.

On the following pages are brief descriptions of some of the exhibits and at the end, a diagram of the hall with alphabetical list of firms to be represented. It was not possible to secure information concerning every exhibit, but the descriptions are representative of what may be expected and will afford the reader an opportunity to decide what he wishes to see first.

WILL C. BRAUN,
Director of Exhibits.

BOOKS

The exhibit of D. Appleton and Company will be in Booth No. 84. Here will be seen the new "Therapeusis of Internal Diseases," edited by Dr. George Blumer; the new group of Surgical Monographs in ten volumes, and a number of new single volume books on various phases of medicine and surgery. They will also show advance proofs of the new editions of Osler's "Practice of Medicine," Holt's "Diseases of Infancy and Childhood," and other standard texts which are being completely revised this year.

The physician who is interested in qualifying as an expert in giving testimony in any criminal case where insanity is pleaded as an immunity or defense, will find three recent books published by P. Blakiston's Son & Co., to be a great help. These authorities on psychiatry and legal medicine will be on display at Space 93.

The exhibit of F. A. Davis Company in Booth No. 96 will include Martinet's Clinical Therapeutics, companion work to Martinet's Clinical Diagnosis and by the same translator, Dr. Louis T. de M. Sajous. Also Dr. Harold Hays' new Diseases of the Ear, Nose and Throat will appear for the first time in the exhibit. Two other works to be seen here are Diseases of Middle Life by Dr. Frank A. Craig and twenty collaborators; and Pseudo-Appendicitis, by DeMartel and Antoine, an important work as a differential diagnosis on this puzzling subject.

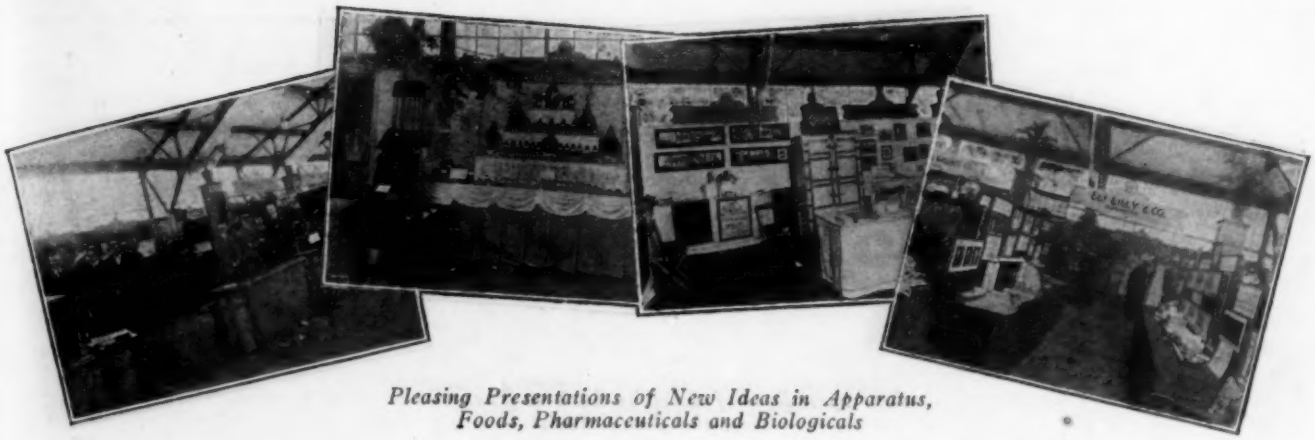
Special interest will attach itself to the exhibit of Lea & Febiger in Booth No. 87 since this firm is celebrating its 140th year, 1785 to 1925. Among their more famous medical publications is Gray's Anatomy, now in its 67th year. In addition to medicine, some new subjects have been added to the list including Agricultural, Educational and Gymnastic works. A full line of the latest publications will be shown.

The Macmillan Company will exhibit their line in Booth No. 94. The new headquarters building of this publishing house has recently been completed. It is located at 60 Fifth Avenue, New York City. An invitation is extended to members of the profession to visit both the exhibit at the convention and the new building in New York.

The C. V. Mosby Company will occupy Booth No. 88 and will show their complete line of medical and surgical books. The new edition of Crossen on Operative Gynecology and many other new books and editions will be presented.

The Frohse Series of Anatomical Charts to the number of eight will be shown by A. J. Nystrom & Co., in Booth No. 55. The new chart on the Genito-Urinary organs is included in the set. The last named chart is entirely the work of Professor Brodel and adds much to the value of the set.

Copies of "The Life of Sir William Osler" by Dr. Harvey Cushing have just been received from the London office of the Oxford University Press. You will be shown a copy at Booth No. 182 and at the same time have an opportunity to look over Oxford Loose-Leaf Medicine and Oxford Loose-Leaf



Pleasing Presentations of New Ideas in Apparatus, Foods, Pharmaceuticals and Biologicals

Surgery as well as other books published by this house.

W. B. Saunders Company will exhibit in Booths Nos. 85 and 86. Among the new works are Bickham's six volume work on Operative Surgery; Abt's eight volume work on Diseases of Children; Vaquez' Diseases of the Heart; Boyd's Surgical Pathology; Draper's The Human Constitution; Reynolds and Macombers' Fertility and Sterility in Human Marriages; the new Mayo Clinic Volume; and new editions of De Lee's Obstetrics, Bandler's Medical Gynecology, Dercum's Physiology of the Mind, and Kerley & Graves Pediatrics. There will also be advance sheets of Lilienthal's Thoracic Surgery and the Practice of Urology by Hugh Young and David M. David.

In Booth No. 1 will be found the exhibit of the 121 year publishing house of William Wood and Company, New York. Some old reliable friends will be found in revised editions: Cunningham—Anatomy; Rose and Carless—Surgery; Delafield and Prudden—Pathology; Cabot—Physical Diagnosis, and many others. Among the new books are the International Medical Annual (43rd year); McKendrick and Whittaker—X-Ray Atlas; Bigger—Bacteriology; Coombs — Rheumatic Heart Disease; Campbell—Fundamental Principles in Treatment; and Turner—Nose, Throat and Ear.

CLOTHING

Spencer Supporting Corsets and Belts in Booth No. 33 will show clearly the different supports that are used for the relief of such conditions as enteroptosis, sacro-iliac sprain, maternity, hernia, etc. These supports will concern physicians who are interested in corrective posture work. The Spencer Supporting Corsets and Belts are made by the Berger Brothers Company of New Haven, Connecticut.

Something unusual in shoes will be displayed in Booth No. 169—a number of new models built on the lines of the normal foot and scientifically constructed to prevent foot strain and weak foot. Graceful style dominates the fundamental good sense of the lasts so that no woman need suffer from unhappy foot conditions when shoes like these are obtainable. They will be shown by Morse & Burt Co., in their exhibits of "Cantilever Shoes."

FOODS AND BEVERAGES

The "Canada Dry" Ginger Ale Company (Booth No. 148) have prepared special means to exhibit the facts in connection with the ingredients of "Canada Dry" and their medical value. Medical men are invited to sample this rich old beverage at the booth.

The Chicago Dietetic Supply House will have an exhibit of special food products such as: Cellu Flour, Casein Flour, Soy Bean Flour, etc., whose use may be applied to various therapeutic conditions. Their value will be explained. A complete line of equipment available for the home management of the diabetic patient will form part of the exhibit, Booth No. 170.

The Dry Milk Company of New York, manufacturers of Dryco and Protolac, will show their products to the profession in Booth No. 13. Some new things developed by the Research Laboratory of the Company in connection with Dryco, and other information of value to physicians, pediatrists in particular, will be given out at their booth.

Horlick's Malted Milk Company will have their exhibit in Booths Nos. 178 and 179. Representatives will show "Horlick's" the Original Malted Milk for the feeding of infants, growing children, invalids and convalescents. They will also demonstrate the convenience of the Dumore Electric Mixer, Model No. 6 for preparing Horlick's Malted Milk and barium sulphate as a suspension medium in x-ray diagnosis.

In Booths Nos. 72 and 73 you will find S. M. A., the adaptation to breast milk as manufactured by the Laboratory Products Company of Cleveland, Ohio. S. M. A. resembles breast milk both physically and chemically. Interesting facts as to the nutritional results from S. M. A., its antirachitic properties, its effect on spasmophilia, and its buffer action will be told by scientifically trained attendants.

In Booth No. 74, the Maltine Company will have on display the various Maltine compounds, as well as the materials such as Malt, Cascara Sagrada, Medicinal Cod Liver Oil, Yerba Santa, etc., which enter into their manufacture. The representatives in attendance will be pleased to supply visiting physicians with sets of memorandum books and visiting lists.

Mead Johnson & Company will show products in their Booth No. 166 that will emphasize their slogan "The Nation Marches Forward on the Feet of Little Children." Mead's Precision Scales for determining amount of milk secreted by the mother; Mead's Casec; Mead's Powdered Protein Milk; Mead's Cod Liver Oil and Dextri-Maltose will be presented. A full explanation of the Mead Service which includes the File Index Box for keeping an exact record of infant cases and the Pedriatic Tool Kit will be given to all interested visitors.

The source, nature and amount of nutritive elements in Mellin's Food will be shown in considerable detail by representatives of the Mellin's Food Company in Booth No. 172. They will be prepared to answer as clearly as possible all questions that have a bearing upon the use of Mellin's Food in both infant and adult feeding.

The Merrell-Soule Company will have in actual operation a miniature apparatus in their Booths Nos. 89 and 90, for the dehydration of milk by the Spray Process. Another feature will be the Klim Wafer, which is Klim Powdered Milk with a slight addition of sugar and flavoring pressed into wafer form, making it possible to actually eat milk. Other pieces of apparatus as well as equipment having a bearing on the safeguarding of their product will also be on exhibit.

The Nutrivoid Diabetic Flour Company will exhibit their product, Nutrivoid Flour, in Booth No. 132. A study of various researches on the digestibility and utilization of complex polysaccharides was the basis for the development of Nutrivoid Flour. Palatable foods made with this vegetable product and suitable for use in Diabetes, Obesity and Constipation, will be shown and samples freely given.

The Postum Cereal Company will have their exhibit in Booth No. 131. Mrs. Carrie Blanchard, Postum's chief food demonstrator, will preside as hostess and serve generous samples of the company's foods. Special gift cartons containing full size packages of Grape-Nuts, Postum, Post's Bran Flakes and Post Toasties will be presented to every physician who visits the booth, and delivered without charge at his home if he desires.

INSTRUMENTS AND APPARATUS

W. D. Allison Company will have a representative showing of their "Library Effect" office equipment in spaces 42

Row upon Row of Exhibits Such as These Will Greet the Conventionist

and 45. Included in their display will be the improved Hanes Rectal Table; several styles of examining, treatment and irrigating tables; instrument and medicine cabinets; treatment chairs and various office accessories.

The Labat Outfit for Regional and Spinal Anesthesia will be shown by the Anglo-French Drug Company in booth No. 140. The instrument and its accessories are put up on a sterilizing tray in a nickel plated case and physicians are cordially invited to stop and inspect the outfit.

Since the products of Eynard were shown at the last convention, the officers of C. R. Bard, Inc., have made several trips to Paris with the suggestions originating from surgeons and urologists of this country. Some of these ideas have been incorporated into practical working instruments which will be shown with some better known models in the Bard exhibit, booth No. 97.

At the W. A. Baum Co., Inc., exhibit in booth No. 71 will be shown the new Cabinet Model instrument for blood pressure. The instrument features a swiveled cover, holding the manometer tube and scale, which may be turned in any direction. When closed, the inflation system, scale and tube are protected and out of sight.

Becton, Dickinson & Company, of Rutherford, N. J., manufacturers of B-D products, will occupy spaces 143, 144, 145 and 146. A competent corps of men will be on hand to show the latest developments in the various specialties of their line.

In booth No. 98 will be found a display of the standard lines of furniture, instruments and supplies of the Frank S. Betz Company. The exhibit will feature the standardization of equipment. An interesting part of the Betz Company program will be a cross word puzzle contest with attractive prizes for each correct solution.

Cameron's Surgical Specialty Company will exhibit in booths No. 5 and 177 the results of present day skill in developing illuminating devices to furnish the physician or surgeon, cool, clean, portable light for diagnostic and operative procedures. Some very ingenious devices will be on display and actual demonstrations made to show their applications and usefulness.

The Carnes Artificial Arm will be demonstrated in booth No. 53 by men wearing the arm. There will also be displayed samples of the arm, showing the simplicity and strength of the hand mechanism.

Sterilization in all its phases will be as much a feature of the Wilmot Castle exhibit on the Pier, in booth No. 171 as the showing of the sterilizers themselves. The latter will include all the later models, especially a new surgical model which gives complete hospital sterilization in small space and at moderate cost. Doctors are invited to stop and discuss sterilizing problems.

Continuous demonstrations on the Roth Metabolism Apparatus with the Chronokymograph attached will be the feature of the exhibit by Warren E Collins in booth No. 18. Other metabolism apparatus will also be displayed, including the new portable Benedict Student Metabolism Apparatus.

The Continental Scale Works will display in booth No. 32 some representative items of their line: Stork Scale, Physician's Scale, School Scale, Health-O-Meter, Nurses' Light Weight Portable Scale and the Clinic Scale.

A complete line of Nose and Throat Sprays, Nebulizers, Steam Vaporizers, etc., for office and prescription purposes will be displayed by the DeVilbiss Manufacturing Company in booths No. 15 and 16.

The new X-Acto Jena Glass Syringe will be displayed by S. Doniger & Company in booth No. 136. The "Greatest Syringe in the World" (2000 capacity) with unique lighting effects will also be shown. The claims that Jena Hard Glass will not break in sterilization and that the scale is permanent and indestructible will be put to the acid test if visitors desire proof.

The Electro Surgical Instrument Company will exhibit in Booth No. 21, the new model of its indirect catherization cystoscope. A lens system of the very finest character incorporated in this instrument gives a sharply defined corrected image of the field under observation. The mechanical construction of the cystoscope is in keeping with its optical qualities and embodies features for facilitating the introduction of catheters and for catheterization.

The exhibit of the Eastman Kodak Company in booth Nos. 150-1-2-3 will show recent developments in X-Ray and clinical photography. A number of medical motion picture films will illustrate the possibilities of the Cine-Kodak. This is based on the invention of a unique film reversed in development so that the film that was exposed is projected; and the operating cost is more than 80% below that of outfits using standard "cine" film.

The Flanders-Day Company of Boston, will have their exhibit in booth No. 69. Besides the regular line of Ligatures, including Catgut, Silkworm Gut and Kangaroo Tendon, they will display a large line of Surgeons' Needles and Surgical Specialties. A special feature will be the Handy Suture Package for minor operations.

One of the main features of The Foregger Company, Inc., exhibit in booth No. 147 will be a demonstration of the safety of ethylene. This company for reasons of efficiency and practicability have designed later models of the "Gwathmey Apparatus" which provide for the use of all three gases with safety and eventually even a fourth gas, carbon dioxide.

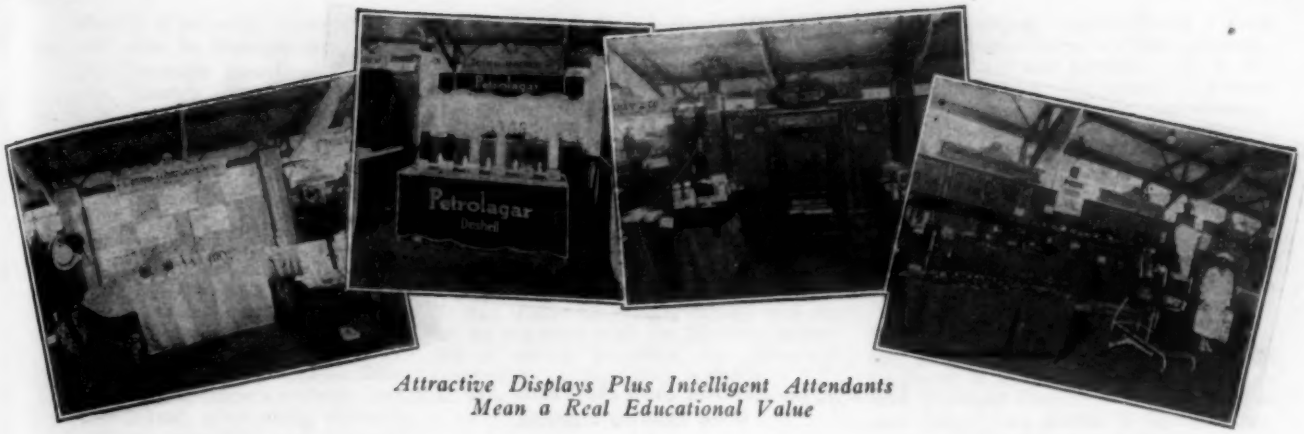
Two new and unique types of the Kromayer Lamp will be shown by Hanovia Chemical & Mfg. Co., in booth No. 68. The Bedside Type is a mobile unit maintaining its own water cooling system and electrical control for the Lamp. The other is called the Dental type, and is a compact mobilization of the Kromayer Lamp, an apparatus to be used where space is limited.

The Harold Surgical Corporation will exhibit the Acme High Powered Microscope, the Standard Deep Therapy Lamp, the Castracane Detachable Blade Operating Knife and the new improved Standard Tonsillectomy Outfit, the U. S. Army General Operating Sets, Eye Cases, Genito-Urinary Sets, etc., in Booths Nos. 22-155-156.

In booth No. 125 will be displayed the New Lundy-Rochester model Anesthetizer made by Heidbrink Co. This is built for the administration of Nitrous Oxid, Ethylene, Oxygen and Carbon Dioxide, separately or in any combination desired.

The appliances manufactured by Wm. H. Horn & Bro., Inc., will be shown in booth No. 35. These will include appliances for hernia, ptosis, laparotomy, varicose veins, arch supports, etc. Eighty-three years of manufacturing experience stand behind this firm.

The Jaeckh Manufacturing Co., will feature in their exhibit, booth No. 100, a new line of improved Robertson anesthesia and suction apparatus. Surgeons who perform nose and throat operations either in the hospital or in



Attractive Displays Plus Intelligent Attendants Mean a Real Educational Value

their private offices will find the following features of interest to them: variable independent suction and pressure; simplified control of the volume of ether; automatic suction control and improved heating devices.

The Kloman Instrument Company will exhibit in Booth No. 76 the recent invention of Dr. Ernest Beeri of the Walter Reed General Hospital. It is a Trocar for Lipiodol injection into the lungs for the purpose of taking X-Ray pictures. An attachment for diagnostic instruments which ennables two persons simultaneously to view the same object will also be displayed.

Levy's Sterling Luer Syringe will be demonstrated by David B. Levy of New York in booth No. 127; this syringe has new features not in the old Luer type syringes. Among these are the blue base on the piston making dosage easily discernible, and the taking of any standard Luer hypodermic needle having a metal top.

A complete exhibit of the new Vim Firth Stainless Steel Hypodermic Needles will be shown by the Macgregor Instrument Company in booth No. 6. These needles are not affected by such reagents as Novocain, Saline and Tincture of Iodin. A new device, the Blood Transfusion Outfit designed by Dr. John M. Scannell, and the Vim line of Emerald DeLuxe Tonsil and Luer Syringes will be shown.

V. Mueller & Company of Chicago, through close cooperation with the surgeon, have developed an apparatus for the extraction of cataract by the vacuum method, a combined ether vapor and aspirator, compressed air apparatus; a new model of the Lancaster Eye Magnet and a great many new surgical instruments. The exhibit will be in Booths Nos. 99-102-103.

Pfau's American Instrument Company will exhibit in Booth No. 91 some novelties in ear, nose and throat instruments and anatomic specimens, such as Seiffert's latest Directoscope; Ruskin's Sphenopalatine-Ganglion Syringe, Maltz-sphenoidal Speculum, Bruening's Electric Headbath, new instruments for bloodless correction of nasal deformities and a special therapeutic lamp for the ear, nose and throat specialist.

In addition to various size cylinders of Nitrous Oxid, Oxygen and Ethylene, the Ohio Chemical & Manufacturing Company will show in Booth No. 115, Lennox Ether, packed in an atmosphere of Carbon Dioxid, this being a new method which prevents deterioration and improves respiration and elimination. They will also exhibit Oxygen feeding apparatus and Kotton Kones, or sanitary cotton points for cleansing and medicating eyes, ears and nostrils of infants and children.

The Physician's Supply & Drug Company of Chicago will have a display of new instruments and other surgical equipment in booth No. 19. The new officers of the company will personally supervise this exhibit.

In Booths Nos. 25-26 will be exhibited the Radiograph-Scope by the Reaves Instrument Shop. This binocular instrument enables one to see in relief a transparent image which has two reflected radiographs fused into one image. These two radiographs are projected upon a sensitized film from a binocular angle.

The exhibit of the Sanborn Company in Booth No 82 will feature the Grafic, a simplified oxygen-consumption apparatus, with Kymograf (revolving chart) attachment for a complete, graphic record of the metabolism test. Also, the new Sanborn Electrocardiograf, a compact clinical model. Owners of Sanborn Apparatus will receive helpful service suggestions.

One of the new features in fracture appliances shown by the J. R. Siebrandt Mfg. Co. at Booths No. 109-110 will be the improved Arm Splint. By means of the yoke support feature, the splint is hung from the shoulder eliminating the binding and cramping of the chest often caused by the Arm Splint strapped to the body.

The George Tiemann Company of New York will exhibit in Booth No. 41 a number of new instruments and appliances. In commemoration of the anniversary of their 100th year in business, the company is preparing a souvenir catalogue (to be issued early in 1926) and will be pleased to have physicians and surgeons register their names and addresses to receive a copy.

The McKesson Analgesia Apparatus will be shown by the Toledo Technical Appliance Company in Booth Nos. 119-120. This apparatus provides for the inhalation of certain mixtures of nitrous oxid-oxygen for the obstetrical patient. Another piece of apparatus shown is for the removal of gas or toxic materials and instillation of hypertonic saline solution during operations for obstruction of the bowel.

OPTICAL INSTRUMENTS

An item of special interest in the exhibit of the Bausch & Lomb Optical Co., Booths Nos. 23-24, will be the new Capillary Microscope. The instrument has three distinct features: (a) A low stage with plenty of working space; (b) special illuminating unit and (c) finger clamp that holds the finger immovable without constricting the circulation. The capillaries of the skin on nail fold of the index finger can be easily observed by means of this new instrument.

The exhibit of E. Leitz, Booth No. 67, will include several new apparatus, among them, the Combination Microscope, a collection of Binocular Stereo Magnifiers, a lowpriced Binocular Microscope, Buerker Colorimeter, Pocket Microscope, Darkfield Condenser with Lamp attached, Blood Counting Apparatus, new Photomicrographic Apparatus, Blood Transfusion Apparatus, an inexpensive Camera "Micca" and the Epstein Saccharimeter for easy determination of Sugar-in-Blood.

In Booths Nos. 8-9 will be found the exhibit of E. B. Meyrowitz, Surgical Instrument Company, Inc. They are sole American agents for Carl Reiner of Vienna and the manufacturers of numerous specialties including Ophthalmometers, Portable Perimeter, new design of Trial Frame, Berger Loupe for foreign bodies in the eye, the Braun Snaretome for tonsil work, the Wolf Mouth Gag and Tongue Depressor combination and the new Callahan's Tonsil Hemostat and Ligature Carrier, all of which will be on display in their booth.

A feature of the exhibit of the Spencer Lens Company in Booth No. 39 will be the operation of their new Automatic Delineascope projecting upon a daylight screen some films showing health and medical subjects put up by the U. S. Public Health Service. New instruments will include the Research Microscope; a low power Binocular Microscope and several types of Microtomes, Delineascopes and Colorimeters.

In Booths Nos. 57, 58 and 61 will be exhibited the microscopes and accessories manufactured by Carl Zeiss, Jena. Instruments, designed by pioneers and foremost teachers of Ophthalmology, will be on display, besides other equipment for diagnosing and treating diseases of the eye. An assortment of Cystoscopes, Proctoscopes, Laryngoscopes, Laparo-Thoracoscopes, Gastroscopes, etc., will invite inspection.

The Eye, the Ear and Even the Palate Are Met With Inviting Appeals

PHARMACEUTICALS AND BIOLOGICALS

Armour and Company's exhibit will depict sources of various pharmaceuticals, surgical ligatures, etc. For example, thyroid glands from the throat of cattle, sheep and hogs will illustrate the source of many thyroid preparations. Dozens of others will be similarly presented. The exhibit will be in Booth No. 17.

Arheol, the active principle of Sandalwood Oil and Riodine, organic assimilable Iodine will be exhibited by the P. Astier Laboratories of Paris in Booth No. 154. The A. Lumiere Laboratories of Lyons also will exhibit at this booth Tulle Gras, a wide mesh, non-adhering, surgical dressing, and their recent product, Cryogenine.

A demonstration of the method used by the Deshell Laboratories to emulsify mineral oil and agar-agar for the product Petrolagar will be given in Booth No. 12. The various combinations in which Petrolager can be obtained—the Plain, the Alkaline, the Unsweetened, and the Petrolager with phenolphthalein, will be on display.

The Drug Products Company will have on exhibit their method of making their "Pulvoid" compressed tablets, and representatives will demonstrate why these tablets are stable and constant in their medicinal strength. They may be seen in Booth No. 124.

The General Chemical Company will exhibit Sofos at Booth No. 52. Sofos differs from the U. S. P. effervescent product in that it contains neither citric nor tartaric acid. Samples will be given to the members in attendance.

The Hoffman-La-Roche Chemical Works will have an exhibit at the Convention in Booth No. 95. Behind the counter will be men from the scientific department prepared to answer questions concerning "Roche" preparations. You will obtain the information you want and feel pleasantly and profitably informed.

Mercurochrome-220 Soluble will be on display in Booth No. 75 by Hynson, Westcott & Dunning. A little applicator bottle containing a 2 per cent. solution for first aid prophylactic and general antiseptic use will be presented to all doctors calling at this exhibit. Information will be available on the local and intravenous employment of this drug.

The exhibit of the Lederle Antitoxin Laboratories, Booths Nos. 141-142 will present a general view of the manufacturing plant located at Pearl River, Rockland County, New York State. One special feature will be a demonstration representing a positive reaction to a pollen diagnostic test in a sufferer from hay fever.

In the exhibit of Lehn & Fink, Inc., will be featured the Exton Albuminometer, a process for the rapid quantitative determination of albumin in urine, which can be used by any practitioner. The Endocrine Preparations made under the Falk-Frankel-McKee process will also be shown. A dissectable model about two-thirds life size which will show all the organs in place is included with this exhibit in Booth No. 37.

The Maltbie Chemical Company of Newark, N. J., will feature Calcreose (Calcium Creosotate) in their Booth No. 3. Officials of the company will be there and pleased to greet their friends of the profession who can stop for a short visit with them.

The H. A. Metz Laboratories, Inc., the manufacturers of "The Salvarsans," will have an exhibit in Booth No. 174. The differences in the chemical structure of the arsphenamines and their relation to therapeutic value will be explained. Representatives will be glad to discuss all phases of the "Salvarsans" or other Metz products such as Novocain, Orthoform and Pyramidon.

Neutral Acriflavine, developed by Benda and manufactured by the National Aniline & Chemical Company will be on exhibit in Booth Nos. 113-116. Why the antiseptic value of Neutral Acriflavine is intensified by contact with serum, how it can be used topically, internally or intravenously and other important questions will be answered by representatives who will be present.

The E. L. Patch Company of Boston will show in Booth No. 4, the method of manufacturing their cod liver oil from the fresh livers to the sealed bottles. The biological method of testing for vitamin potency will also be explained. This is an opportunity for physicians to get some first hand information on the method of manufacturing and testing cod liver oil.

The exhibit of Swan-Meyers Company in Booth No. 183, will feature their Ragweed Pollen Extract as a prophylactic for the common fall type of hayfever. Samples of the various pollens as well as a complete herbarium of the plants responsible for them will be displayed. Literature on the testing of hay-fever patients to determine susceptibility will be distributed.

Booth No. 27 will contain the Radium Exhibit of the United States Radium Corporation of New York. Standard and special Radium Applicators will be displayed, also the recently perfected Platinum Iridium Radium needles which have a diameter as small as an emanation seed trocar.

The Winthrop Chemical Company will exhibit in Booth No. 36 some of their products, such as Luminal, Veronal, Protargol, Adalin and Sajodin. Detailed literature and information on the more recent introductions will be furnished by representatives.

X-RAY AND ELECTRO-THERAPY APPARATUS

Booths Nos. 180-181 will be occupied by the Acme-International X-Ray Company who will have on display the Six-Sixty Generator, the latest addition to the Precision Type Coronaless series of Roentgen Generators. In addition, the Acme-International Polytherm and Portable Diathermy Generators, and the Radio Knife will be shown.

H. G. Fischer & Co., Inc., will have a complete exhibit of physiotherapy equipment in Space No. 62. The Senior "FO" and "LO" Combination Electrical Cabinets, improved, and their improved types "G" and "GP" Portable Diathermy Outfits will be shown. For the first time, a distinctly different type Deep Therapy Lamp will be displayed. Trained assistants will be in attendance.

The Liebel-Flarsheim Company will show in their exhibit, Booths Nos. 10-11, a new model Dynelectron and the new style Raysun Generator for radiant light and heat applications; a new compressed air vacuum and vibration outfit and the Dr. Hugh T. Young model combined Examining, Operating and Radiographic Urologic Table.

The McIntosh Electrical Corporation of Chicago will display their latest models of electro-physiotherapy apparatus in Booth No. 14.

The Patterson Screen Company will demonstrate in Booth No. 164, their new apparatus, the Patterson Foreign Body Fluorscope. It may be used as a small Fluoroscope for viewing inaccessible parts. The Patterson Fluoroscopic

and Patterson Cleanable Intensifying Screens will also be demonstrated.

The new Pressure Sterilizer of the Prometheus Electric Corporation will be shown in Booth No. 135. This sterilizer provides hospital safety for the physician as it sterilizes his bandages and gauzes under fifteen pounds pressure, insuring the destruction of germs and spores.

The Victor X-Ray Corporation, Chicago, will put on an exhibit in Booths Nos. 104-105-106, primarily for educational purposes—to show the physician the electrical and mechanical principles involved in roentgenology and the practice of physiotherapy. Diathermy, the high frequency current, and surgical diathermy, ultra-violet therapy, and the use of sinusoidal and galvanic currents will be featured.

The Waite & Bartlett Manufacturing Company will exhibit a new apparatus in Booth No. 46. It is a tilt table having an oil immersed x-ray unit at the back. The construction is such that the operator can do both horizontal and vertical radiographic work without removing the patient from the apparatus.

New developments in Cystoscopes and other Urological Instruments make up a prominent part of the Wappler Electric Company in Booths Nos. 112-114. The Electro-Surgical methods will be represented by the Clark Excell and the Endotherm. The Squier Cystoscopic X-Ray Table of unique design will be shown together with the Myostat, a new device which provides for electrical treatments by precision methods.

MISCELLANEOUS

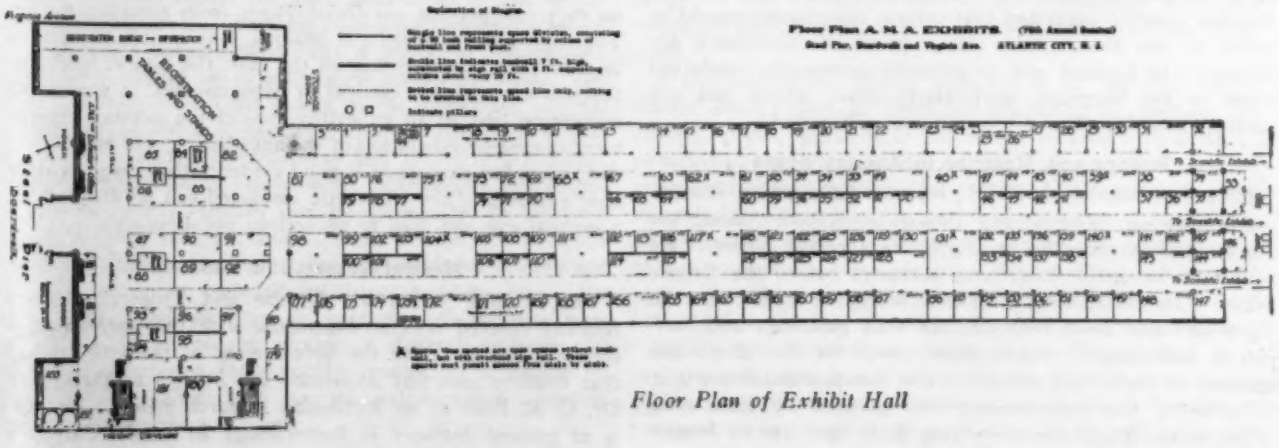
Cragmor Sanatorium, at Colorado Springs, Colorado, will exhibit a model of their building, together with a 7 x 8 foot panoramic view of their grounds, main buildings and cottages. Dr. A. M. Forster, Director, will attend in person and supply any detailed information desired. Table space near entrance.

In Booth No. 2, the Medical Protective Company of Fort Wayne, will meet its contract holders and the profession generally. Representatives of every department, executive, legal, renewal and selling, will be in attendance. Lounging quarters will be provided.

The Trans-Lux Daylight Picture Screen and its complementary devices, the Trans-Lux Opaque Projectors will be shown in Booth No. 20, by the Trans-Lux Daylight Picture Screen, Inc. The new Trans-Lux Model B Opaque Projector, a light weight and popular priced machine and the new Trans-Lux Automatic Opaque Projector will be seen in actual operation.

List of Exhibitors

	Space No.
Abbott Laboratories, The, Chicago	7
Acme-Internat'l X-Ray Co., Inc., Chicago	180-181
Allison Co., W. D., Indianapolis	42-45
Amer. Assn. of Med. Milk Comm., Chicago	65
American Opt. Co., Southbridge, Mass	111
Anglo-French Drug Co., New York	N.W.8'x8' 140
Appleton, D. & Co., New York	84
Armour & Co., Chicago	17
Astier, P., New York	154
Bard, C. R., Inc., New York	97
Bard-Parker Co., Inc., New York	107
Baum Co., W. A., Inc., New York	71
Bausch & Lomb Opt. Co., Rochester, N. Y.	23-24
Becton, Dickinson, Rutherford, N.J.	143-4-5-6
Berger Bros. Co., The, New Haven, Conn	33
Betz Co., Frank S., Hammond, Ind.	98
Blakiston's Son & Co., P., Philadelphia	93
Borcherdt Malt Extract Co., Chicago	64
Brady & Co., Geo. W., Chicago	126
Buck X-Ograph Co., St. Louis	56-59
Burdick Cabinet Co., Milton, Wis.	40-43-44-47
Cambridge Instrument Co., Ossining, N. Y.	77-78
Cameron's Surg. Spec. Co., Chicago	5 and 177
Canada Dry Ginger Ale, Inc., New York	148
Carnes Artificial Limb Co., Kansas City, Mo.	53
Castle Co., Wilmot, Rochester, N. Y.	171
Chicago Dietetic Supply House, Chicago	170
Collins, Warren E., Boston	18
Continental Scale Wks., Chicago	32
Cragmor Sanat., Colo. Spgs.	Table space Casino
Davis Co., F. A., Philadelphia	96
Deshell Labs., Inc., Chicago	12
DeVilbiss Mfg. Co., The, Toledo	15-16
Doniger & Co., S., Inc., New York	136
Drug Products Co., Inc., L. I. City, N. Y.	124
Dry Milk Co., The, New York	13
Eastman Kodak Co., Rochester, N. Y.	150-1-2-3
Electro Surg. Inst. Co., Rochester, N. Y.	21
Engeln Electric Co., Cleveland	28-29
Fischer & Co., H. G., Chicago	62
Flanders-Day Co., Boston	69
Foregger Co., Inc., New York	147
Geck Laboratories, Inc., New York	147
General Chemical Co., New York	52
Gen. Opt. Co., Mt. Vernon, N. Y.	S. W. 8'x8' 39
General X-Ray Co., Boston	128
Hanovia Chem. & Mfg. Co., Newark, N. J.	68
Harold Surg. Corp., New York	22-155-156
Heidbrink Co., Minneapolis	125
High Ten. Trans. & Equip. Corp., Union Hill, N. J.	173
Hille Laboratories, Chicago	N.W. 8'x8' 39
Hoeber, Inc., Paul B., New York	184-185
Hoffman-La Roche Chem. Wks., The, New York	95
Horlick's Malted Milk Co., Racine, Wis.	178-179
Horn & Bro., Inc., Wm. H., Philadelphia	35
Hynson, Westcott & Dunning, Baltimore	75
Ideal Cocoa and Chocolate Co., New York	122
Illinois Surg. App. Co., Chicago	50
Jaeckh Mfg. Co., Cincinnati	E. ½ 100
Mead Johnson & Co., Evansville, Ind.	166
Kelley-Koett Mfg. Co., Covington, Ky.	30-31
Kellogg Co., Battle Creek, Mich.	130
Kloman Inst. Co., Washington, D. C.	76
Knox Gelatine Co., Inc., Johnstown, N. Y.	101
Kny-Scheerer Co., The, New York	48
Laboratory Prod. Co., Cleveland	72-73
Lea & Febiger, Philadelphia	87
Lederle Antitoxin Labs., New York	141-142
Lehn & Fink, Inc., New York	37
Leitz, E., Inc., New York	67
Lentz & Sons, Chas., Phila.	S. W. 8'x8' 140
Levy, David B., New York	127
Lewis Mfg. Co., Walpole, Mass	49
Liebel-Flarsheim Co., The, Cincinnati	10-11
Linen Underwear Co., Greenwich, N. Y.	165
Lippincott Co., J. B., Philadelphia	175-176
MacGregor Inst. Co., Needham, Mass	6
Macmillan Co., The, New York	94
Maltbie Chem. Co., Newark, N. J.	3
Maltine Co., The, New York	74
Massillon Rubber Co., The, Massillon, O.	149
McIntire, Magee & Brown Co., Philadelphia	34
McIntosh Elec. Corp., Chicago	14
Medical Protective Co., The, Ft. Wayne, Ind.	2
Mellin's Food Co., Boston	172
Merrell-Soule Co., Syracuse, N. Y.	89-90
Metz Labs., H. A., New York	174
Meyrowitz, Inc., E. B., New York	8-9
Middlewest Labs. Co., Chicago	W. ½ 100
Mine Safety Appl. Co., Pittsburgh	121
Morse & Burt Co., Brooklyn	169
Mosby Co., C. V., St. Louis	88
Mueller & Co., V., Chicago	99-102-103
National Aniline & Chem. Co., New York	113-116
National Dairy Council, Chicago	38
National Radium Prod. Co., New York	N. ½ 183
Nelson & Sons, Thos., New York	163
Nutrivoid Diab. Flour Co., Brooklyn	132
Nystrom & Co., A. J., Chicago	53
Ohio Chemical & Mfg. Co., Cleveland	115
Oxford University Press, New York	182
Patch & Co., E. L., Boston	4
Patterson Screen Co., The, Towanda, Pa.	164
Pelton & Crane Co., Detroit	123
Pfau's American Instrument Co., New York	91
Physicians Supply & Drug Co., Chicago	19
Pilling & Son Co., Geo. P., Philadelphia	70
Post Electric Co., Inc., New York	63
Postum Cereal Co., New York	131
Powers-Weightman-Rosengarten Co., Phila.	133
Prior Co., W. F., Hagerstown, Md.	92
Prometheus Electric Corp., New York	135
Radium Chemical Co., Pittsburgh	83
Radium Emanation Corp., New York	60
Reaves Instr. Shop, Greensboro, N. C.	25-26
Safety Anes. App. Concern, Chicago	54
Sanborn Co., Boston	82
Sanl. & Hosp. Equip. Co., Battle Creek	117-118
Saunders Co., W. B., Philadelphia	85-86
Schuemann-Jones Co., The, Cleveland	139
Siebrandt Mfg. Co., J. R., Kan. City, Mo.	109-110
Sklar Mfg. Co., J., Brooklyn	108
Sorensen Co., Inc., C. M., L. I. City, N. Y.	167-168
Spencer Lens Co., Buffalo	E. 8'x16' 39
Squibb & Sons, E. R., New York	79-80-81
Standard X-Ray Co., Chicago	160-161-162
Swan-Myers Co., Indianapolis, Ind.	S. ½ 183
Taylor Instr. Cos., Rochester, N. Y.	157-158-159
Tiemann & Co., Geo., New York	41
Toledo Technical Appl. Co., Toledo, O.	119-120
Trans-Lux Daylight Pict. Screen, N.Y.	20
U. S. Radium Corporation, New York	27
Victor X-Ray Corporation, Chicago	104-105-106
Vitamin Food Co., New York	66
Waite & Bartlett Mfg. Co., L. I. City, N. Y.	46
Wappler Electric Co., L. I. City, N. Y.	112-114
Western Elect. Co., New York	134-137-138
Winthrop Chemical Co., New York	36
William Wood & Co., New York	3
Zeiss Jena Agency, Carl, New York	57-58-61



Floor Plan of Exhibit Hall

Foreign Letters

LONDON

(From Our Regular Correspondent)

April 2, 1925.

Sir Ronald Ross on Governments and Tropical Disease

Sir Ronald Ross, speaking at the London Press Club, thanked the press of the world for its help in the antimalaria campaign. At the same time, he did not think the governments of the world were making sufficient progress or utilizing enough the information in their possession with respect to tropical diseases. He estimated that malaria alone took two million lives a year. Whole colonies and vast tracts of the world's surface were rendered useless even today, although they had obtained the knowledge as to the disease-carrying mosquito. As a nation, we were not spending enough money in investigating tropical and other diseases. We were spending $900,000 per annum on medical research, but that only amounted to one penny (two cents) per head of the population of the United Kingdom.

Postgraduate Teaching

The Fellowship of Medicine and Postgraduate Medical Association is endeavoring to extend the facilities for postgraduate teaching in London. To this end a meeting of physicians was held at the house of the Royal Society of Medicine. Sir Arbuthnot Lane, the president of the fellowship, said that it had already grown to considerable dimensions. In time it must become one of the most important agents for education that the medical world had known. Postgraduate education was a habit that every physician must acquire if he hoped to succeed in his profession and to gain the respect and confidence of the public. The consulting branches had recognized the great value of the interchange of ideas, and kept constantly in touch with their colleagues at home and abroad. The physician in general practice must realize the equal importance of being well abreast of the most recent knowledge. Mr. H. J. Paterson, honorary secretary, said that about forty general and special hospitals were now associated with the work of the fellowship. In America, every self-respecting physician attended a course about once a year. They wanted to know the needs of the postgraduates. Many suggestions had been sent in, one being that courses should be given in the administration of anesthetics. In the discussion that followed, Surgeon-Commander T. B. Shaw said that postgraduate courses in the navy had proved of great service. He thought that there should be more clinical work in the courses instead of lectures. Lieut.-Col. Sir William Leishman spoke of the postgraduate work being done at the Royal Army Medical College, where they encouraged men to obtain the higher degrees in particular subjects. Another speaker suggested that certain consultants should be asked to put their names on a panel of instructors for strangers in London and to organize personally conducted tours to the hospitals, particularly those which had not medical schools. The discussion was adjourned.

Biology and Medicine in Ancient Egypt

Prof. G. Elliot-Smith, F.R.S., recently delivered an interesting lecture on "Medical and Biological Science Among the Egyptians," arranged by the Egypt Exploration Society. He said that for more than thirty centuries before the Greeks began to formulate their theories in biology and medicine, the Egyptians had been recording in wall paintings and bas-reliefs marvelously exact observations on the distinctive features of plants and animals. The common statement that, in spite of the opportunities the practice of embalming afforded, the Egyptians were singularly ignorant of human anatomy was no longer tenable. They not only played an important part in collecting, by direct observation, much of the information concerning biologic facts and practical medicine used later by the Greeks as the foundation of their science, but they also speculated on the physiologic functions of the heart and blood, the significance of what the Greeks afterward called the pneuma, and the biologic functions of water. In fact, they formulated ideas of the whole process of life giving and the maintenance of life, which represent the germs of the theories of vital phenomena commonly supposed to be wholly Greek in origin. In Egypt, however, such speculations were an expression of religious thought. They were inquiries made primarily for the purpose of discovering how to prolong the existence of the dead king, so that he could attain the divine attribute of immortality that would convert him into a god. The advantage the Greeks enjoyed was that they were in a position to accept the knowledge and the theories of the Egyptians, freed from the hieratic encumbrances that hampered the development of a rational system of biology and medicine in Egypt. In this sense the Greeks created a real science by emancipating such inquiries from the thraldom of theology.

Action for Injury to the Eye in Administering an Anesthetic

In a recent case, damages were claimed for the loss of the sight of one eye, on the ground that this had been caused by the negligent administration of an anesthetic during a prolonged operation. The defense was that the injury to the eye, if caused by the anesthetic, was not due to any negligence in administering it, but to septic conditions in the plaintiff. This case presented important problems for both anesthetists and ophthalmologists. A laparotomy was performed to find an intestinal obstruction. An anesthetic, consisting of two parts of ether to one of chloroform, was administered on an open mask, a Gamgee pad being placed on the face. This pad had twice become so wet with the anesthetic that the anesthetist changed it. On the day after the operation the patient complained of violent pain in the left eye, and an ophthalmic surgeon found a condition such as might result from contact with the anesthetic. There was swelling of the corneal epithelium, but no abrasion, and the eye was acutely inflamed. Eventually a dense scar formed across the middle of the cornea. The defense was that the patient's state was highly toxic, the bowels were opened only with great difficulty during the days after the operation, and that a damage so slight as to be easily recovered from in the normal subject led in this poisoned subject to the serious keratitis resulting in scar formation. It was admitted by some of the experts for the defense that this damage was probably caused by drops of liquid anesthetic; but others maintained that the vapor itself would have been enough, in the patient's condition, to set up the corneal damage. This is important, as no care can prevent anesthetic vapor from reaching the eye. The jury, after a prolonged hearing, was unable to agree as to a verdict. Commenting on the case, the *Lancet* holds that there is no evidence, clinical or experimental, to support the contention that in an unhealthy subject the normal engorgement caused by inhalation of the anesthetic could have caused the lesion, but that there is good evidence that even considerable amounts of the anesthetic employed can be dropped into a normal eye and lead to no serious consequences.

Medical Research in Rhodesia

The London School of Hygiene and Tropical Medicine recently entered into arrangements with the government of southern Rhodesia for the development of research work in that country, and has appointed for a term of three years Dr. G. R. Ross to be Rhodesian research fellow. Dr. Ross is at present lecturer in bacteriology in Leeds University.

He will proceed to Salisbury, southern Rhodesia, early in March, and will devote himself to an inquiry into the etiology and pathology of blackwater fever. The services of the laboratory at Salisbury have been placed at the disposal of Dr. Ross, who, in addition to his research work on blackwater fever, will, if it is considered desirable, carry out other investigations.

PARIS

(From Our Regular Correspondent)

March 25, 1925.

Thoracectomy in Tuberculosis

In a recent number of the *Presse médicale*, Professor Bérard of Lyons has an article on thoracectomy in the tuberculous. This operation, like artificial pneumothorax, required a long time to gain general recognition, but is coming more and more into vogue. It was in 1885 that de Cérenville, in 1888 that Quincke, and in 1889 that Carl Spengler and Turban attempted the first operations. In 1908, following the indications of Brauer, Friedrich de Marbourg attempted to induce the collapse of a tuberculous lung by an operation inspired by that of Schède in pleural empyema. This operation amounted to an almost complete resection of the ribs of the diseased hemithorax. Since this was too mutilating and caused too much shock, Sauerbruch substituted in 1912 the operation at present employed. It consists in the resection of the juxtavertebral segment of the ribs from the first to the eleventh inclusive, the total length of the fragments resected amounting to from 80 to 160 cm. As a result of this rib resection, a marked depression of the chest wall is brought about, which causes considerable reduction of the capacity of the hemithorax and thus promotes the collapse of the lung necessary for the immobolization and the cicatrization of the tuberculous lesions.

While these methods were being employed in Switzerland, Central Europe, the Scandinavian countries, America and England, the technic recommended by Tuffier since 1892 continued to be used in France. Now and then, a tuberculous lung would be separated from an adherent pleural wall, and fat or muscle pads, or various foreign bodies, would be interposed between the relieved lung and the chest wall; but the results were rather mediocre. It was not until 1913 that Bérard performed his first partial thoracectomy. This operation which, in certain foreign circles, the phthisiologists are beginning to perform themselves, may be carried out "*à froid*" in cases of unilateral pulmonary tuberculosis in which pneumothorax is not feasible or cannot be accomplished under favorable conditions. It can be performed in an emergency to combat certain complications that constitute an immediate danger to the life of the patient, such as repeated hemoptysis, perforation of the lung, or grave complications resulting from a purulent effusion.

Bérard has established the main indications of the operation that he advocates. Patients should be carefully selected by a competent phthisiologist after a period of observation. The patients should be in a state of good resistance. The nature, localization and the extent of the pulmonary lesions, the integrity of the opposite lung and the condition of the heart, blood vessels, liver, kidneys and digestive apparatus, should be painstakingly established. It is chiefly in sanatoriums or in special services that the patients to be operated on will be well selected, and it is by reason of the more judicious selection of patients that the operative results are ordinarily better in such places than anywhere else. No good can be expected from an operation on patients who in a hospital pass from a service of general medicine, in which they have been inadequately studied, to a service of general surgery, where they run the risk of being operated on under unsuitable conditions.

Professor Bérard formerly operated on his patients in a single stage, but he has now abandoned this method, since he has found that the one-stage operation increases the immediate operative risks. Thoracectomy, which consists in the resection of a considerable portion of all the ribs, including the first, which is difficult to reach, is always an operation that presents certain risks, irrespective of the accuracy and rapidity with which it is performed. The operator must be prepared to face accidents due to infection, which, even after perfect hemostasis, may develop in the vast operative wound. Syncope may occur and cause sudden death during the first few days that follow the intervention. Further dangers lie in a marked displacement of the mediastinum, the heart and the large vessels, or from the irritation of their nerves. These dangers are much less now that the two-stage operation has been substituted. In the first stage, the eight lower ribs are resected under local anesthesia, and in the second stage the three upper ribs. Under these conditions the immediate mortality is low. With thoracectomy one may combine, moreover, phrenicectomy (resection of the phrenic nerve), an operation easily and rapidly accomplished, which results in one-sided paralysis of the diaphragm, which then becomes pushed up and compresses the lung considerably on the side operated on. Nevertheless, physicians still continue to have little confidence in thoracectomy. The majority of French physicians, not having had the opportunity to observe the excellent results of certain operations performed in foreign countries, are inclined to regard thoracectomy as an illogical and brutal operation, which exposes the patient to considerable immediate risk without holding the promise of anything more than a doubtful improvement of short duration. These prejudices are so widespread that the patients themselves are influenced by them, with the result that they generally refuse to consider the operation when it is proposed to them as their only chance of recovery. They do not make up their minds to accept the operation until it is too late, which explains, in general, the cause of the poor results, which, in turn, tend to cast suspicion on the method. When physicians and patients have learned to put a proper estimate on thoracectomy, there is no reason why the operation, when performed at the time and in the manner required, shall not give in France just as good results as elsewhere; for instance, permanent successful outcome in from 60 to 70 per cent. of the cases, with an immediate mortality of from 3 to 10 per cent., depending on whether the wider or the more closely drawn operative indications are followed.

Thoracectomy is generally regarded as a method supplementing artificial pneumothorax. Bérard, however, thinks that, in certain cases, it may and should be considered at the start as possibly the only efficacious treatment, particularly in cases of basal tuberculosis, which are of such grave prognosis and which so frequently are complicated with such extensive pleural adhesions as to render pneumothorax of no avail.

It will perhaps be difficult to accept in full Bérard's enthusiastic endorsement of thoracectomy when he opposes the success of this operation to the results secured with artificial pneumothorax, which, in his opinion, has very few cases of complete recovery to its credit, and which, he asserts, imposes on patients many long years of inactivity and invalidism, during which they are constantly exposed to pleural complications that are often serious. Bérard seems to be rather optimistic when he anticipates the restoration to normal activity within a few months after a successful thoracectomy.

Aside from exceptional cases, pneumothorax when it is possible and when it can be carried out under favorable conditions will remain the treatment of choice in unilateral tuberculosis—at least until some form of specific antituber-

culosis medication shall have been discovered. But Bérard is right in expressing the hope that physicians in France may become better acquainted with the indications and the possibilities of thoracectomy and that they will, when occasion arises, give their patients the benefit of this operation.

RIO DE JANEIRO

(From Our Regular Correspondent)

March 15, 1925.

The Second Aortic Sound in the Diagnosis of Congenital Syphilis

Dr. Martagão Gesteira, professor of diseases of children in the Bahia Medical School, recently presented to the Medical Society of the Hospitals a paper on the value of the intensification of the second aortic sound in the diagnosis of congenital syphilis. Taking as a base the studies made by Dr. Rubião Meira, a professor in the São Paulo Medical School, and submitted to the National Academy of Medicine in 1916, Dr. Meira calls attention to the fact that the majority of our clinicians seem to deny the so-called Rubião Meira sign any value in the diagnosis of syphilis. Dr. Gesteira explains why this sign of syphilis does not seem to have much importance in the adult, since there are many causes which might originate it. It is not the same in infants. In an infantile clinic the intensification of the second aortic sound is, therefore, a very important element in favor of heredosyphilis, since in childhood the toxic infections and other causes which raise blood pressure have not had a chance to act as yet. Therefore, the intensification of the second aortic sound is a rare phenomenon in infancy. Dr. Gesteira described in detail two recent cases in which, on this basis alone, he made the diagnosis of heredosyphilis. This was afterward confirmed by the disappearance of the sign after antisyphilitic treatment. Dr. Gesteira mentioned the papers of the Argentine pediatricians Drs. Henrique and João Beretervide, who agree with the observations of the Bahia professor on this point.

Course of Malariology

The malaria section of the International Sanitary Board of the Rockefeller Foundation in Brazil has organized a course in malariology in combination with the national department of public health. The course has been specially planned for health officers now filling positions in the rural sanitation section of the public health department. The chiefs of rural sanitation of the several states were invited to appoint one of their assistants to take the course. The number of students was limited to ten. The curriculum will include the epidemiology of malaria; study of the parasite; study of transmitting agents, and principles of sanitary engineering. All of them will be discussed from both the theoretical and the practical aspects. Field work will be undertaken to study the anopheles mosquito and local conditions bearing on this problem. There will also be built a mosquito-proof plant under the direction of an engineer, and practical work done in the laboratory. Finally, the students will be required to make a field inspection and collect all available data bearing on endemic malaria. For this phase of the work, groups of two physicians will be assigned to each zone. The director of this new school is Dr. Mark Boyd, and the professors are Drs. Carlos Cagas, Henrique Aragão, Adolpho Lutz, R. Souza Pinto and Egydio de Almeida. Of the ten students enrolled in the postgraduate course, six attended the opening.

Chronic Myeloid Leukemia

Dr. Ernesto de Souza Campos of the Oswaldo Cruz Institute has made an intensive anatomopathologic study of a case of chronic myeloid leukemia, in a woman, aged 36. After removal of the spleen, there was a slight numerical increase of the red corpuscles, but the leukemic process became immediately worse, and the patient died forty-six days after the operation. Two days before death, the blood examination showed: red cells, 1,904,000; hemoglobin, 29 per cent., and white cells, 68,160; differential count, myeloblasts and hemocytoblasts, 56 per cent., myelocytes, 6.8 per cent. The mesenteric glands, confluent, were a solid mass 8 by 6 by 2½ inches thick. The lymph follicles in the digestive tract were also very enlarged, and appeared as white grayish nodules, very prominent.

The cytologic examination showed that the enlargement of the lymph system was caused by new growth of myeloblastic and myelocytic cells, with numerous mitoses. The myeloid matrix *par excellence*, the marrow, was compact and entirely constituted of myeloid cells, so numerous that not a single fat cell could be seen. Myelocytes predominated in this tissue. Megalokaryocytes were very abundant and were of variable volume. In the liver, myelocytes were located especially in the interlobar spaces and interlobar septums. In the suprarenals there was little functioning tissue left. In the cortical region, a large area of compact myeloid tissue was seen. Most interesting were the myelotic foci observed in the kidney, suprarenals, pancreas, lymph glands, liver, ovary, stomach, intestines, vermiform appendix and gallbladder.

There has been much discussion as to the origin of the extramedullary myeloid foci. Morphologic and experimental data apparently demonstrate that they are autochthonous. This view finds support in the cases of aleukemic leukemia and many other instances reported in the literature of cord, blood and lymph lymphocytosis coexistent with myelosis of the spleen or cases of coexistence of lymphomas of the marrow, spleen, kidney and liver with myelosis of lymphoid structures. The same explanation might be offered for the perivascular myeloid areas. As diffuse lymphoid foci were observed also in the connective tissue of different organs in three other cases of lymphatic leukemia, it must be admitted that these heteropic centers of myelopiesis must originate from a polyvalent common cell, or at least one having more than one connective element endowed with hematopietic power. While all agree that Ranvier's clasmatocyte has a potential myeloid action, it is still to be shown whether this cell is responsible for the lymphatic proliferation of the connective tissue. Should this be proved to be a fact, it would be an argument in favor of the unitarian doctrine.

PRAGUE

(From Our Regular Correspondent)

March 10, 1925.

Orthopedic Surgery

The Czechoslovak Orthopedic Association was recently organized in Bratislava, and Prof. Dr. V. Chlumsky has been elected its president. The purposes of the association are twofold: It hopes to promote the interest in the scientific questions relating to orthopedic surgery, which became of great interest following the war, and it intends to better the conditions of the crippled. The provinces of Bohemia and Moravia already have provincial associations for this purpose, but in Slovakia such institutions are lacking. Nor is there any national federation of these associations. Chlumsky teaches orthopedics at the Bratislava Medical School.

Political Parties and the Medical Profession

The party of Czechoslovak socialists, which is one of the strongest political parties of the country, at its annual convention in Brno formulated a policy for the advancement of public health in the state. The resolution, which was accepted unanimously, emphasizes the importance of prevention of disease against the old curative conception. One of the first tasks of the party should be the education of its members in public health, not only for their own good but also for the purpose of recruiting from its members participants in the official and private health agencies. Active membership in

the Red Cross, Tuberculosis League and the child welfare organizations was especially recommended. The central executive committee of the party will organize an advisory council on social welfare and public health with a paid secretary as its executive. The chief function of this council will be to formulate the policy of the party in specific public health questions especially for legislative purposes. The resolution represents the result of the efforts of medical men organized as a group in the party of Czechoslovak socialists. A similar group exists in the party of national democrats, and has recently been formed in the social democratic party to represent the interests of the medical profession in political life.

Effects of Exposure to Cold

The Czechoslovak medical press is discussing the effects on the human body of exposure to cold. This discussion was provoked by a lecture to the Association of Czechoslovak Physicians given by Prof. Charles Chodounsky, who is an old worker in this field. Largely through experiments on himself, he came to the conclusion that the importance of exposure to cold has been greatly exaggerated. He summarized the experience gained in the war, which seems to show that there has been no notable increase of diseases attributed to exposure to cold in the trenches. In the discussion, an interesting point was brought forward by Prof. A. Heveroch, who suggested the influence of fear as a contributing factor in the production of diseases attributed to the exposure to cold. Professor St. Ruzicka, on the other hand, defends the evidence of the other side largely on the basis of animal experimentation. Prof. O. Rybak, in his experiments on the effects of irritation of the skin on the internal organs, has demonstrated that the refrigeration of the surface of the body can produce in internal organs, probably through reflexes, serious disturbances of the blood circulation which might lead to pathologic changes. The opinion of the medical profession in Czechoslovakia is divided, with the Prague school against the theory of detrimental effects of cold and the Brno and Bratislava schools for it.

Studies of Defectives and Delinquents

The first number of a new medical periodical has appeared recently in Prague. It is devoted to research concerning the feebleminded, deaf and dumb, blind, morally defective and crippled. The editor, Dr. Charles Herfort, is associate professor of psychiatry at the Prague medical school. Dr. Herfort has brought together in Prague a group of workers in the fields of heredity, anthropology, psychology, pedagogy and allied sciences, and directed their activities. A dispensary was opened in Prague which serves not only for the vocational guidance of children, especially those who are in some way defective, but also as a place to investigate pertinent problems. The results of this research will be published in the new periodical.

The Collection of Vital Statistics in Czechoslovakia

The registration of births, deaths and marriages has been performed chiefly through churches, and, only in the case of persons without confession, through the civil authorities. Quarterly a summary of the data was prepared for the political authorities, and through the provincial authorities reached the central authorities in summary form. The originals of the certificates remained in the hands of the registrar. It has long been felt that this system is not reliable and, moreover, a detailed study has been impossible, owing to the lack of original data in the central offices. January 1, a system of individual certificates was introduced. These are filled out and retained by the registrar, who sends the originals monthly to the state statistical institute in Prague for the further compilation of statistical data.

Marriages

WILLIS LINN to Miss Mildred Westbrooke, both of Binghamton, N. Y., at Montrose, Pa., March 27.

CLYDE FRANKLIN RIDGE, Thurmond, W. Va., to Miss Gladys Moody of Richmond, Va., February 18.

CLAUDIUS A. STREET, Winston-Salem, N. C., to Miss Julia Lilly Montgomery of Raleigh, recently.

ALFRED P. MERIWETHER, St. Jacob, Ill., to Miss Lavona Collins of Edwardsville, March 3.

CARL HAROLD PHETTEPLACE, Powers, Ore., to Miss Edith P. Alton of Eugene, in February.

ROBERT M. ROSS to Miss Margaret Taylor, both of Canton, Kwang-Tung, China, recently.

ARTHUR HOLMES JOHNSON, to Miss Fostina Bishop, both of Patchogue, N. Y., March 12.

Deaths

Howard Van Rensselaer, Albany, N. Y.; Medical Department of Columbia College, New York, 1884; formerly professor of materia medica and therapeutics and adjunct professor of theory and practice of medicine, Albany Medical College; past president of the American Therapeutic Society; at one time on the staffs of the Albany, St. Peter's and the Child hospitals, the Hospital for Incurables and the Home for the Friendless; served during the World War; aged 66; died, March 31, in Washington, D. C.

William Davis Foster, Kansas City, Mo.; Homeopathic Medical School of Missouri, St. Louis, 1869; formerly dean and professor of surgery, Kansas City Hahnemann Medical College; member of the International Association of Railway Surgeons; at one time on the staff of the Kansas City General Hospital; aged 83; died, February 5.

James V. Roberts, Plymouth, Pa.; Hahnemann Medical College of Philadelphia, 1873; formerly member of the school board, city council, mayor and county commissioner in Beverly, N. J.; aged 75; died, March 15, at the Wyoming Valley Homeopathic Hospital, Wilkes-Barre, of pneumonia.

Richard William Garrett, Kingston, Ont., Canada; Queen's University Faculty of Medicine, 1882; Trinity Medical College, Toronto, 1887; emeritus professor of obstetrics and gynecology, Queen's University Faculty of Medicine, Kingston; aged 72; died, January 25, of pneumonia.

George G. Balcom, Lake Wilson, Minn.; University of Minnesota College of Homeopathic Medicine and Surgery, Minneapolis, 1896; member of the Minnesota State Medical Association; aged 56; died recently, of cerebral hemorrhage.

Ruth Clement, National Park, N. J.; Woman's Medical College of Pennsylvania, Philadelphia, 1889; member of the Medical Society of New Jersey; aged 77; died, January 26, of cerebral hemorrhage.

Harold Metcalfe Clarke, Bridgeport, Conn.; University of Toronto Faculty of Medicine, Toronto, Ont., Canada, 1909; member of the Connecticut State Medical Society; aged 39; died, Dec. 31, 1924.

George N. Skinner, Winterset, Iowa; Drake University College of Medicine, Des Moines, 1889; member of the Iowa State Medical Society; aged 71; died, February 19, of pneumonia.

Virgil A. Wood, Blackwell, Okla.; Kentucky School of Medicine, Louisville, 1885; member of the Oklahoma State Medical Association; aged 75; died, March 19, of pneumonia.

Harold Melnotte Howard, Providence, R. I.; Jefferson Medical College of Philadelphia, 1905; member of the Rhode Island Medical Society; aged 43; died, April 1, of pneumonia.

Charles Lloyd, New York; Eclectic Medical College of Pennsylvania, Philadelphia; Civil War veteran; aged 85; died, March 21, at the Presbyterian Hospital, of pneumonia.

Lewis Frank Rice, Owosso, Mich.; University of Michigan Homeopathic Medical School, Ann Arbor, 1890; aged 59; died, March 17, at the Memorial Hospital, of pneumonia.

Isaac Philip Eddy, Williamstown, W. Va.; Baltimore University School of Medicine, 1897; aged 56; died, March 24, at a hospital in Huntington, of cerebral hemorrhage.

William Lee Hood, Greenwood, S. C.; Medical Department of the University of the City of New York, 1889; aged 59; died, March 15, at Bartow, Fla., of cerebral hemorrhage.

Daniel Johnson, Jr., Northfield, Vt.; University of Vermont College of Medicine, Burlington, 1881; aged 72; died, March 16, at a hospital in Boston, following an operation.

Francis M. Howard, St. Paul, Ind.; Cincinnati College of Medicine and Surgery, 1864; formerly member of the state legislature; aged 84; died, March 23, of influenza.

Samuel William Bogan, Santa Barbara, Calif.; George Washington University Medical School, Washington, D. C., 1860; Civil War veteran; aged 84; died, March 18.

Frederick Dwight Ingraham ✠ Toledo, Ohio; Toledo Medical College, 1898; aged 55; died, March 15, at St. Vincent's Hospital, of pneumonia, following an operation.

Henry D. Zandt, Jamesburg, N. J.; University of Pennsylvania School of Medicine, Philadelphia, 1871; aged 77; died, March 30, following a long illness.

Johan K. Schreiner, Two Rivers, Wis.; University of Christiania, Norway, 1881; aged 67; died, March 16, at Oslo, Norway, of carcinoma of the pancreas.

Edward S. Johnson, Philadelphia; Jefferson Medical College of Phliadelphia, 1886; aged 62; died, April 1, at the Pennsylvania Hospital, of pneumonia.

Edward Gibson Hynes ✠ Brooklyn; Columbia University College of Physicians and Surgeons, 1900; aged 49; died suddenly, March 14, of heart disease.

Alonzo E. Horton, Poultney, Vt.; University of Vermont College of Medicine, Burlington, 1858; aged 89; died, March 24, of injuries received in a fall.

Henry A. Schwartz, Loudonville, Ohio; Medical Department of the University of Wooster, Cleveland, 1886; aged 67; died, March 19, of pneumonia.

Berryman H. Painter, Muncie, Ind.; Physio-Medical College of Indiana, Indianapolis, 1883; aged 74; died suddenly, March 17, of heart disease.

William T. McCain, McCrory, Ark.; Memphis (Tenn.) Hospital Medical College, 1891; aged 60; died suddenly, March 26, of heart disease.

J. W. Walker, Longwood, Miss.; Louisville (Ky.) Medical College, 1891; aged 60; died, March 15, at a sanatorium in Greenville, of pneumonia.

William T. Baldus, Washington, D. C.; Washington Homeopathic Medical College, 1896; formerly a druggist; aged 77; died, March 24.

Edmund Kolb, New York; Medical Department of the University of the City of New York, 1884; aged 65; died, March 19, of pneumonia.

Harlow Ashton Boyle, Tampa, Fla.; Jefferson Medical College of Philadelphia, 1891; Spanish-American War veteran; died, March 17.

William R. Grant, Lyons, Mich.; Michigan College of Medicine and Surgery, 1891; aged 68; died, March 19, following a long illness.

Edward James Cardwell, Chattanooga, Tenn.; Meharry Medical College, Nashville, 1909; aged 42; died, March 18, of pyonephrosis.

Cyrus Chester Moore ✠ Philadelphia; University of Pennsylvania School of Medicine, Philadelphia, 1889; aged 66; died, March 21.

Patrick Henry O'Hara, Pottsville, Pa.; University of Pennsylvania School of Medicine, Philadelphia, 1892; aged 60; died, March 18.

Charles C. Bower, Elkhart, Ind.; University of Pennsylvania School of Medicine, Philadelphia, 1877; aged 74; died in March.

Frederick Henry Yorke, Foosland, Ill.; Rush Medical College, Chicago, 1885; aged 75; died, March 17, of heart disease.

William J. Scott, Pomeroy, Ohio; Starling Medical College, Columbus, 1895; aged 53; died, March 23, of pneumonia.

Frank H. Kallmeyer, Glasgow, Mo.; St. Louis Medical College, 1877; aged 69; died, March 17, of heart disease.

Herman W. Faber, St. Louis; Beaumont Hospital Medical College, St. Louis, 1888; aged 59; died, April 1.

W. T. Street, Rose Hill, Miss. (years of practice); aged 71; died, March 17, of cerebral hemorrhage.

The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE JOURNAL'S BUREAU OF INVESTIGATION, OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER GENERAL MATERIAL OF AN INFORMATIVE NATURE

ANOTHER GLAND TREATMENT FRAUD

The Lewis Laboratories and the Druesen-Kraft Laboratories Debarred from the United States Mail

In March, 1921, the Youth Gland Chemical Laboratories was incorporated in Illinois with a Board of Directors consisting of Fanny Haenicken, Lewis J. Ruskin and Leonard Breckwoldt, all of Chicago. In February, 1922, the name of the concern was changed to Druesen-Kraft Chemical Laboratories, which was alleged to have for its officers:

LEWIS J. RUSKIN, president and manager
LEONARD BRECKWOLDT, vice-president
WALTER HAENICKEN, secretary
F. HAENICKEN, treasurer

According to information received, Lewis J. Ruskin used to be with the Ingersoll Watch Company, Breckwoldt has been connected with some drug concern, and Walter Haenicken is said to be, or to have been, manager of one of Chicago's large department stores.

For some time this concern advertised first as the "Youth Gland Chemical Laboratories," later as the "Druesen-Kraft Chemical Laboratories," and still more recently as the "Lewis Laboratories." The business consisted of selling, on the mail-order plan, alleged sexual stimulants (aphrodisiacs). Victims were obtained largely by means of full-page newspaper advertisements. More than two years ago a visit to this concern disclosed, as might have been expected, that the variously named "laboratories" were nothing but an office where girl typists were filling in form letters and stuffing them into envelopes. An individual who introduced himself as "Mr. Ruskin, office manager," said to the caller that he was not a doctor but a chemist and he added that "chemists know more than doctors do about glands and medicines, as they are the ones who analyze them." He said, further, that the "treatment" was a secret one that was put up for them by Frederick Stearns & Co. of Detroit. He went on to state that it could not be sold through the drug stores because one of the ingredients had to be used within a few days after making. He also vouchsafed the information that, so far, they had not advertised in Chicago papers but that they expected soon to run full-page advertisements in the Hearst Sunday papers. Ruskin also informed the caller that the Charles H. Fuller Company of Chicago handled their advertising.

As a matter of fact it was not true that they had not at that time advertised in Chicago papers as the Chicago *Abendpost*, a German-language newspaper, in its issue Feb. 23, 1923, carried a full-page advertisement of this fraud.

Now, two years later, the federal authorities have declared the Lewis Laboratories and the Dreusen-Kraft Laboratories frauds, and have closed the mail to this variously named concern.

THE SOLICITOR'S MEMORANDUM

As is always the case in the issuance of a fraud order, the Solicitor for the Post Office Department sends to the Post Master General a comprehensive Memorandum outlining the facts in the case and giving the reasons for recommending the issuance of the order. From the memorandum of Judge Edgar M. Blessing, Solicitor of the Post Office Department, to Post-Master General Harry S. New, we learn that on Dec. 3, 1924, the Lewis Laboratories and Lewis J. Ruskin were called on to show cause by Jan. 6, 1925, why a fraud order should not be issued against them. At the request of the concern's attorney, Mr. John A. Nash of Chicago, the date of the hearing was postponed until January 22. On that date L. J. Ruskin, accompanied by Mr. Nash, appeared at Washington and the case against the Lewis Laboratories and also

against the Druesen-Kraft Laboratories were heard concurrently. To quote from Judge Blessing's report:

"The Lewis Laboratories was started by Lewis John Ruskin, in January, 1920, and was incorporated in January, 1924, the officers being Lewis J. Ruskin, President; Leonard Breckwoldt, Vice President, and Walter Haenicken, Secretary-Treasurer. Mr. Ruskin, who is quite a young man and has had some prior experience as a drug salesman, is in charge of the business. The business consists in the sale through the mails of two so-called treatments, one for men and one for women. Mr. Ruskin informed the post office inspector during the investigation that the Lewis Treatment for men contained interstitial cells of Leydig, vitamine A and B extracts, peptonate of iron, glycerophosphates and *bacillus Bulgaricus*, while that for women contained the same ingredients except that lutein extract, an ovarian substance, replaces the testicular material. During the hearing it developed that certain changes had been made in the formula from that just given in that cascarin is included, and in place of the *bacillus Bulgaricus*, which Mr. Ruskin stated did not keep well, there has been substituted nux vomica. According to the evidence the formula for the glandular tablets for males is as follows:

"Orchic extract	1 gr.
"Glycerophosphates	1 gr.
"Peptonate of iron	1 gr.
"Cascarin	⅒ gr.
"Vitamines from yeast	1½ gr.
"Nux vomica	⅛ gr.

"The tablets for females contain ovarian substance instead of orchic extract. A so-called thirty-day treatment consists of a bottle of red tablets containing the glandular matter, a number of suppositories, also alleged to contain the glandular matter, and a certain number of yellow-colored laxative pills. This treatment sells for $5.00. The fifteen-day treatment consists of the same arrangement excepting that only half the quantity is included. This sells for $3.50. A so-called 'demonstration' treatment is given free, and this consists of a day's treatment containing a few of the red tablets, a suppository, and several of the laxative pills.

NO LABORATORIES

"According to the evidence the Lewis Laboratories has no 'laboratory' in the sense that this term is generally understood. The medical preparations are put up by a prominent Detroit, Michigan, pharmaceutical house. No physicians or chemists are employed. The business is conducted almost entirely by girls, who open letters, file them, send out the samples, and make cards for each person 'treated.' About seventy persons were employed at the time of the Inspector's interview with Mr. Ruskin in July, 1924. About 500 letters daily were received during the summer, while in the winter months the number is almost double. About 200 packages per day were sent out. Mr. Ruskin informed the Inspector that while the expected gross income of about $250,000 during 1924 would not yield a profit, he expected that substantial profits would be made later.

"Mr. Ruskin also informed the inspector that advertisements were being carried in about 300 papers and that this advertising was handled exclusively by the Charles H. Fuller Company, an advertising agency, of Chicago, Ill. This concern, Mr. Ruskin testified at the hearing, prepared the advertising and placed it in the various publications. He alleged that all he did was to supply certain basic data as to the ingredients of the medicines and excerpts from the 'authorities' from time to time, after which he relied on the advertising agency to do the rest. He admitted that the claims set forth were too broad and exaggerated, but felt secure in the belief that the agency knew how far to go. He stated that he took from the 'authorities' only the favorable comments and on cross examination admitted that he ignored qualifying statements in the books relied upon by him."

THE NEWSPAPER'S RESPONSIBILITY

The Solicitor's memorandum then quotes freely from various newspaper advertisements. It calls attention specifically to a full-page advertisement headed in two-inch-high black type "Your Glands Wear Out!" that was published by the Lewis Laboratories in various newspapers over the country. The center of this full-page advertisement is occupied by a picture of athletic looking men and women—he-men and she-women type—clasped in the close embrace of a modern dance. As insets there were also pictures of a muscular looking individual with nothing on but a breech-clout and a man and woman mountain climbing. Some of the claims made in the advertisement were:

"If You Could Prevent the Wear and Tear on Your Glands Caused by Sickness, Age, Disease, etc., You Would Look and Feel as Young at 70 as at 25. Science However Has Solved the Secrets of the Glands and Now for the First Time Shows You the True Way to KEEP or REGAIN Your Vigor by Feeding and Replenishing the Most Important Glands!"

"Build Up Your Glands and You Build Up Your Strength and Endurance."

"A Man Is Worth What His Glands Are Worth"
As Good a Man at 75 As He Was at 25!
Keep Fit Your Glands are You
Build Up Your Glands and You Build Up Your Strength and Endurance

Some of the illustrative matter (greatly reduced) used in newspaper advertising of the "Lewis Laboratories" fraudulent "gland treatment." Sexual "rejuvenation" was the key note of all this advertising. The orginal illustrations were 24 inches in width.

"It is based entirely on the principle of Feeding Actual Gland Substance Direct to the Glands thereby actually renewing and rejuvenating them."

"This method of giving new life to the glands is advocated and endorsed by the leading students of gland therapy throughout the world—including Dr. Arnold Lorand who is generally conceded to be the greatest living authority on this subject."

"The actual Method of Treatment used by us is the result of exhaustive experiments covering several thousand cases, during the past two years."

"The 'Lewis' Treatment Is Practically Never Failing."

THE JOURNAL has in its files a score or more of this particular full-page advertisement. It appeared in such papers as the Knoxville *Sentinel* whose slogan is "A Clean, Constructive Newspaper," the Birmingham *News*, "The South's Greatest Newspaper," the Seattle *Post-Intelligencer*, "The Newspaper of the Home," the New York *American*, "A Paper For People Who Think," and the Boston *American*, another "Paper For People Who Think." These are but a few, however, of the many respectable newspapers that furnished the "contact" between the public and the Lewis Laboratory fraud.

In its case the government called Drs. J. D. Stout, Harvey W. Wiley, Raymond O. Dart, Clarence G. Wright and Lyman S. Kebler, all of Washington, and put to these men questions regarding the formula of the treatment as well as the claims made for them. Each physician after careful examination of the material uniformly testified that the product would not accomplish the results represented in the Lewis Laboratories

literature. Many of the claims, in fact were characterized as absurd. Dr. M. L. Sullivan of the Hygienic Laboratories of the Public Health Service tested the Lewis nostrums for the vitamines alleged to be present and found them to contain none. It should be said at this point that in addition to the thinly veiled claims for aphrodisiac effect, the Lewis treatment was said to cure bladder trouble, constipation, female ailments, impotence, lost manhood, lost vigor, sexual weakness, kidney trouble, liver disorders, lumbago, menstrual pains, all nervous troubles, piles, prostate trouble, rheumatism and stomach trouble. Quoting again from the Solicitor's Memorandum:

"As part of the Government's evidence there are a number of so-called test cases. In these test cases the writers describe themselves as having various symptoms or as suffering from certain serious disorders, and request further information. Some of the writers indicated diseases requiring highly specialized treatment, other diseases and ailments for which there is no recognized treatment known to medical science, yet in all cases the literature and trial treatment was sent, including a series of so-called follow ups, and if the price of the medicine was sent the full treatment was shipped. In one case the writer said:

"I come from Hungary-Bohemia. I read your add. I suffer what we call there, Xoraxso. Can your remedy cure me? Please send demonstration treatment free."

"In due course the demonstration treatment was sent with the usual literature, urging upon this writer to purchase the full course treatment. Of course 'Xoraxzo' is only a collection of letters, but it shows the extent to which the concern goes in

Letterheads used by the "Lewis Laboratories" and "Druesen-Kraft Laboratories" — neither of which was a laboratory and both of which were frauds—in duping the public.

its efforts to sell the medicine. The evidence shows that if the price is remitted the medicine is sent, regardless of the disease, age or condition of the patient.

THE DRUESEN-KRAFT CONCERN

"The Dreusen-Kraft Laboratories (not incorporated), is another name under which the promoter of Lewis Laboratories is engaged in selling a so-called lost manhood cure of practically the same composition as the Lewis treatments. The letterhead used in this scheme is as follows:

'DRUESEN-KRAFT LABORATORIES
Druesen-Kraft Gland Compound
Distributers of
The World's Foremost Gland Restorative.

Foreign Offices:	American Distributing Office,
LEIPZIG	331 W. Washington Street,
BERLIN	Chicago, Ill.'
PARIS	

"The intent is to lead persons to believe that this is a concern of international organization and renown. The evidence shows that it has no foreign offices and no laboratories. The Lewis and Druesen-Kraft schemes are conducted in the same office by the same persons and at the same address, which is the address of the Lewis building.

"The evidence shows that the Druesen-Kraft business was first established about four and a half years ago by Mr. L. J. Ruskin, with a view of catering to the drug trade only. This resulted in failure. The Druesen-Kraft mail-order business was started early in 1924, and about 1,000 circulars were sent out. The business had developed considerably by Dec. 13, 1924, on which date the inspector was informed the business would be entirely discontinued. It is shown by the evidence that this was not done, as during the month of December about 50,000 circulars were sent out. It is shown further by the evidence that the circularization was of names of persons who had failed for one reason or another to purchase the Lewis treatment.

"The literature of this concern, like that of the Lewis Laboratories, was prepared by the Charles H. Fuller Agency. The average mail is about ten letters daily. No newspaper advertising is done, but names taken from the Lewis Laboratory files are circularized. Gross income up to Dec. 15, 1924, was stated as about $2,500 by Mr. Ruskin in his interview with the inspector, but the records of money orders paid at the Chicago post office indicate the receipts as far in excess of the figure named. No chemists or physicians are employed, and the tablets are put up by the same pharmaceutical house that prepares the Lewis Laboratory tablets. In connection with the literature used by the Druesen-Kraft concern, Mr. Ruskin informed the inspector that he regarded it as so bad that he was afraid to show it to his attorney, who was then engaged in reviewing the Lewis literature. In the Druesen-Kraft literature a symptom blank is used calling for the following information:

"'Age..... Married..... Weight..... Occupation..... Do you suffer from constipation?..... Indigestion?..... Kidney or Bladder?..... Prostate?..... Have you ever taken treatment for Gland Weakness?..... How is your general physical condition?.....'

"Mr. Ruskin informed the inspector that the 'age' was wanted, as lists of names and addresses were more valuable where the ages are between 50 and 70, also that the age was wanted so that the medicine would not be sent to minors. Although Mr. Ruskin is not a physician or chemist [thus contradicting Ruskin's claim to the caller from THE JOURNAL.—ED.], he claimed the symptom blank would enable his concern to know what remedies to send in case it was thought the remedies ought to vary a little. According to the evidence the Druesen-Kraft gland compound contains the following ingredients:

"Orchic substance
"Pituitary gland substance
"Prostate gland substance
"Desiccated liver
"Other tonic ingredients; vitamin extracts, phosphates, etc.

"The original price is given as $10, reduced to $7.50, and further reduced to $2.95 in so-called 'Special Offers.' Since the literature used in exploitation of the Druesen-Kraft compound is admittedly more exaggerated than that of the Lewis Laboratories, hereinbefore set out in some detail, it is not believed necessary to repeat here any of the Druesen-Kraft literature for that reason. The medicine is sent to all who remit the price, regardless of the ailments or diseases from which the persons may be suffering or the extent to which the said diseases or ailments have progressed."

In a test case made by the government of the methods of the Druesen-Kraft concern a letter was written purporting to come from a man who was 96 years old and weighed 102 pounds, who described his case as "Prostate very bad, testicles all gone, hair falling out, teeth all gone. About ready to die!" In spite of this the Druesen-Kraft concern notified this ancient human wreck that its treatment was being sent and reminded him to have the money ready for the postman.

Judge Blessing in his memorandum declared that he found from the evidence that the claims that many years' effort had been put into the discovery of the medicine, and that "after thousands of experiments we found that the proper way to rebuild worn out glands is to feed them every day small amounts of concentrated gland substance" were false and fraudulent and without any basis of fact. Judge Blessing also calls attention to the fact that as part of the literature used by Ruskin there was a small booklet entitled "Glands," published, ostensibly, by the "Health Books Publishing Company, Chicago, Ill.," and purporting to be a scientific treatise, the alleged work of one Walter von Henry. The booklet was copyrighted and priced at $1.00. In discussing this piece of advertising Judge Blessing says:

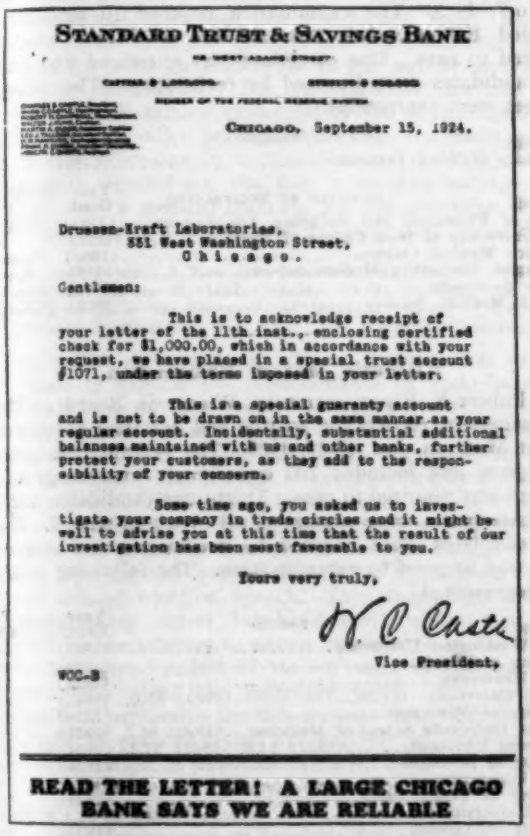
THE FULLER ADVERTISING AGENCY AGAIN

"While the booklet purports to be a general treatise on 'glands' it it noted that on pages 22, 34 and 40 the Lewis and Druesen-Kraft Laboratories are given particular mention. I find that the statements above quoted respecting the booklet are utterly false and fraudulent. The evidence shows that there is no such person as 'Walter von Henry,' the alleged author, but the booklet was suggested and written by a representative

of the Fuller Advertising Agency to offset certain objections on the part of reputable newspapers to the exploitation through their columns of what they believed to be purely lost manhood cures, and was largely for their enlightenment. In order to give the booklet the appearance of authenticity it was decided by the promotor and the agency to use part of the name of a relative of Mr. Ruskin, whose real name was Walter Henry Haenicken who according to the evidence is of German extraction and had some apparent right to the prefix 'von.' The evidence shows that only about 25 of these booklets were actually sold. The name 'Health Publishing Company' is entirely fictitious."

In closing his memorandum to the Post-Master General, Judge Blessing states:

"According to the evidence the total cost of advertising has been approximately $300,000, of which about between $10,000 and $14,000 is still due. The gross annual income is between $250,000 and $300,000, according to Mr. Ruskin. The cost of



STANDARD TRUST & SAVINGS BANK

CHICAGO, September 15, 1924.

Druesen-Kraft Laboratories,
551 West Washington Street,
Chicago.

Gentlemen:

This is to acknowledge receipt of your letter of the 11th inst., enclosing certified check for $1,000.00, which in accordance with your request, we have placed in a special trust account #1071, under the terms imposed in your letter.

This is a special guaranty account and is not to be drawn on in the same manner as your regular account. Incidentally, substantial additional balances maintained with us and other banks, further protect your customers, as they add to the responsibility of your concern.

Some time ago, you asked us to investigate your company in trade circles and it might be well to advise you at this time that the result of our investigation has been most favorable to you.

Yours very truly,

W. C. Castle

Vice President.

WCC-B

READ THE LETTER! A LARGE CHICAGO BANK SAYS WE ARE RELIABLE

As has often been shown, some banks are not above lending their smug respectability to medical frauds—when such frauds are financially successful. The Lewis fake did a $300,000 business annually.

the medicine and packing in the thirty-day treatment selling at $5.00 is about 60 cents, that of the fifteen-day treatment about 45 cents and that of the 'demonstration' treatment about 9 cents.

"In view of the assertion by Ruskin that he had immediately stopped the mailing of all advertising matter upon receipt of the citation in this case, his apparent frankness in giving the department all desired information, and at fact that all remittances have been and are being received under the several trade names used by him, also by reason of his most earnest request that his personal name, and incidentally his family and other social and business connection be not involved by the issuance of a fraud order, I have to recommend that his personal name be not included in the fraud order.

"The evidence shows, and I so find, that this is a scheme for obtaining money through the mails by means of false and fraudulent pretenses, representations and promises.

"I therefore recommend that a fraud order be issued against the Lewis Laboratories and the Druesen-Kraft Laboratories at Chicago, Ill."

The mails were closed to this fraud March 19, 1925.

Correspondence

"RENAL FAILURE CASTS"

To the Editor:—Dr. Addis does a service by taking advantage of his extremely interesting observations on casts to point out the apparent lack of interest in morphology, as contrasted with function (THE JOURNAL, April 4). As a matter of fact, however, these broad types of casts have been discussed on rare occasions, although never in such a vivid concrete way as has Dr. Addis.

Professor von Jaksch first called my attention to them many years ago, and no student of his was ever allowed to miss seeing them. I am also under a distinct impression that they have been referred to in works by Quensel, Oertel and Senator.

In a paper which Dr. Addis could not reasonably be expected to have come across in his survey of the literature, mention of the existence of such casts was made with the mere statement that their presence suggested some distention of the tubules (Exton, W. G.: The Relation of Urine to Life Insurance, Proc. 11th annual meeting, Medical Section of the American Life Convention, Excelsior Springs, Mo., March 17, 1921).

As Dr. Addis explains that "no study was made of the urinary sediment in toxemias that were not accompanied by a very definite albuminuria," it will amplify his contribution to note that the broad casts are occasionally seen in the urines of persons who regard themselves as being well enough to apply for life insurance, and it has always been the practice of the Prudential Laboratory to note them separately on its reports. I have been following the death claims on these cases for the last twelve years, and up to the present time find no difference in mortality, between the broad and other types of casts.

Dr. Addis also states that they [broad casts] may be found in dilute urine, in which hyaline casts are never seen. In preclinical material, very dilute urines occasionally show very large numbers of hyaline casts; usually the result of a combination of violent exercise like tennis, cold shower, and copious drinking. Clinically, showers of hyaline casts occur in the sometimes dilute urines of precomatose patients.

WILLIAM G. EXTON, M.D., Newark, N. J.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS and queries on postal cards will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

HICCUP IN INFANTS

To the Editor:—Very often I have seen hiccup in infants. Is this due to an excess of food, as it usually appears after meals? Please let me know the best ways to correct the condition and its probable cause.

HUMBERTO A. FISCHNALER, M.D.,
Guatemala City, Guatemala.

ANSWER.—The occurrence of hiccup in adults as well as in infants may at times signify a serious disease of the central nervous system, peritoneum, intestinal tract or urinary organs. Hiccup is frequent in young infants, and, as a general thing, manifests itself after meals. Sometimes, several meals elapse without the occurrence of hiccup. Singultus occurs if the stomach is overloaded or if flatulence and indigestion are present; also if air is swallowed. It is frequently observed in breast-fed babies, especially during the first three months of life. In these cases, it is probably due to distention of the stomach by food associated with the swallowing of air. In most instances in which the condition occurs in breast-fed babies, it is transitory and is not

of serious importance. On the other hand, if it persists for a considerable time, its repeated occurrence tends to cause exhaustion.

Hiccup in infants may be due to an irritation of the phrenic nerve in any part of its course, which may give rise to irregular diaphragmatic contractions, or it may be a reflex act. If the gastric branches of the vagus nerve are stimulated or irritated, the impulses are conducted along the afferent path, the efferent impulses producing muscular contraction and spasm of the diaphragm. The explosive sound is probably caused by closure of the vocal cords at the moment when the diaphragm descends in inspiration.

The correction of this condition requires careful attention to the details of feeding. The baby should be fed at four-hour intervals. The quantity of food should not be excessive, in order to avoid overloading the stomach. Many babies remain at the breast for too long a time and nurse intermittently, frequently sucking the breast when it is empty. In this way they swallow a great deal of air. Bottle-fed babies may swallow large amounts of air because of faulty technic in holding the bottle. After feeding, the baby should be held upright, so that he may more readily regurgitate more or less air which he almost invariably swallows. If the hiccup is persistent, the ingestion of a few teaspoonfuls of hot water or a weak solution of sodium bicarbonate may be employed. Sometimes a weak acid drink, such as diluted lemon juice, gives relief. In the severe or more protracted cases, a sedative may be required.

DEATHS FROM CANCER

To the Editor:—What are the statistics on deaths in the United States yearly due to carcinomas? Of that number, what percentage is of the gastro-intestinal tract? I am especially interested with reference to carcinomas of the large bowel.

J. E. BRINKMAN, M.D., Waterloo, Iowa.

ANSWER.—According to the mortality statistics published last year by the Bureau of the Census, the number of deaths from malignant tumors in 1921 in the death registration area of the United States was 76,274, which is the rate of 86 per hundred thousand, against 83.4 in 1920 and 80.5 in 1919. The rate for 1921 shows an increase of 36.5 per cent. over the rate for 1900, and the rate is continuous to 1917 if the years 1906 and 1911 are excepted.

While the foregoing figures are crude rates, the adjusted mortality rates for 1921 are higher than those for 1920 in twenty-six of the thirty-four states in the registration area, and the adjusted rate for the states increased from 78.5 in 1920 to 81.2 in 1921, or 3.4 per cent.

Fourteen per cent. of the cancer deaths in 1921 were due to cancer of the peritoneum, intestines and rectum. In 1920, there were 6,238 deaths in the death registration area due to cancer of the intestines (except the rectum) and, in 1921, there were 6,834, or a rate per hundred thousand population of 7.1 and 7.7, respectively. The number of deaths in 1920 of cancer of the rectum and anus was 2,816, and in 1921, 3,029, or a rate of 3.2 and 3.4 per hundred thousand population, respectively. The percentage given for 1920 and 1921 for cancer of the intestines (except rectum) is 8.6 and 9.0, respectively, and for cancer of the rectum and anus for the same period, 3.9 and 4.0.

The mortality statistics of the Bureau of the Census which give these figures are usually on file in public libraries.

COUNTRY LIFE MORE HEALTHFUL THAN CITY LIFE

To the Editor:—Please send me authority (statistics) that country life is more healthy than city life.

S. R. WALLIS, M.D., Armour, S. D.

ANSWER.—From 1909 to 1920, the urban death rate from all causes, per thousand of population, ranged from 15.4 to 14.1, while the rural death rate varied from 13.4 to 11.9. In THE JOURNAL, Oct. 1, 1924, Shepard and Diehl say that 21.68 per cent. of all recruits from the cities were rejected, while only 16.89 per cent. from the country were rejected. From this the Provost Marshal General concluded that a considerable advantage accrues to the boy reared in the country.

In an exhaustive study of defects found in drafted men, Love and Davenport report 609 physical defects per thousand for urban registrants and 528 per thousand for rurals, and about 15 per cent. more defects in recruits from selected cities than those from rural districts.

Other pertinent data will be found in the article noted and in the U. S. Life Tables published by the Bureau of the Census in 1921.

Medical Education, Registration and Hospital Service

COMING EXAMINATIONS

ARKANSAS: Little Rock, May 12-13. Sec., Reg. Bd., Dr. J. W. Walker, Fayetteville; Sec., Homeo. Bd., Dr. Allison A. Pringle, Eureka Springs; Sec., Eclectic Bd., Dr. C. E. Laws, Fort Smith.

GEORGIA: Augusta, June 2-4. Sec., Dr. C. T. Nolan, Marietta.

NATIONAL BOARD OF MEDICAL EXAMINERS: Written examinations in Class A medical schools. Parts I and II, June 24-26. All applications for this examination must be made on or before May 25. Sec., Dr. J. S. Rodman, 1600 Walnut St., Philadelphia.

NEVADA: Carson City, May 4. Sec., Dr. S. L. Lee, Carson City.

Arizona January Examination

Dr. W. O. Sweek, secretary, Arizona Board of Medical Examiners, reports the written examination held at Phoenix, Jan. 6-7, 1925. The examination covered 10 subjects and included 100 questions. An average of 75 per cent. was required to pass. One candidate was examined and passed. Six candidates were licensed by reciprocity. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
University of West Tennessee		(1914)	81.8

College	LICENSED BY RECIPROCITY	Year Grad.	Reciprocity with
College of Physicians and Surgeons, Los Angeles		(1915)	California
State University of Iowa College of Medicine		(1921)	Iowa
Baltimore Medical College		(1902)	Tennessee
Washington University Medical School		(1915)	Missouri
Cornell University		(1916)	New York
Leonard Medical School		(1902)	Oklahoma

Wisconsin January Examination

Dr. Robert E. Flynn, secretary, Wisconsin Board of Medical Examiners, reports the written and practical examination held at Madison, Jan. 13-15, 1925. The examination covered 25 subjects and included 100 questions. An average of 75 per cent. was required to pass. Thirty-one candidates, including 4 osteopaths, were examined, all of whom passed. Nineteen candidates were licensed by reciprocity and one candidate was licensed by reregistration. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
George Washington University		(1920)	89.1
University of Illinois		(1924)†	80.8
Tulane University		(1924)	86.5
Harvard University		(1920) 91.6, (1922)	86.0
University of Minnesota		(1924)	90.5
St. Louis University School of Medicine		(1920) 84.2, (1921)	90.0
Washington University		(1922) 83.6, (1923) 91.2, (1924)	87.4, 89.0
University of Nebraska		(1924)	87.9
Temple University		(1919)	78.8
University of Pennsylvania		(1921)	90.1
McGill University		(1924, 3)	83.3, 85.1, 87.3
University of Toronto		(1922)	89.5
University of Bonn, Germany		(1920)*	82.5
University of Breslau, Germany		(1923)*	79.3
University of Hamburg, Germany		(1922)*	85.0
University of Kiel, Germany		(1918)*	85.0
University of Munich, Germany		(1911)* 86.8, (1921)*	83.3
University of Tübingen, Germany		(1922)*	87.2
University of Budapest, Hungary		(1914)*	83.8
Osteopaths		77.4, 78.7, 82.4,	92.0‡

College	LICENSED BY RECIPROCITY	Year Grad.	Reciprocity with
University of Colorado		(1923)	Colorado
Bennett Medical College		(1907)	Illinois
Chicago College of Medicine and Surgery		(1917)	Illinois
Loyola University		(1924)	Illinois
Northwestern University		(1924)	Illinois
Rush Medical College		(1921) Illinois, (1922)	Illinois
University of Illinois		(1923)	Illinois
Indiana Med. Coll., School of Med. of Purdue Univ.		(1906)	Indiana
Medical Department of Drake University		(1900)	Iowa
State University of Iowa College of Medicine		(1913)	Iowa
University of Michigan Medical School		(1911)	Michigan
Univerity of Minnesota		(1922)	Minnesota
Cornell University		(1915)	California
Eclectic Medical College, Cincinnati		(1921)	Ohio
Meharry Medical College		(1915) Louisiana, (1918)	Tennessee
University of Erlangen, Germany		(1922)*	New York
University of Frankfort-on-the-Main, Germany		(1921)*	Colorado

* Graduation not verified by American Medical Association.

† This candidate has completed his medical course and received an M.B. degree and will receive his M.D. degree on completion of a year's internship in a hospital.

‡ License to practice surgery granted.

Book Notices

DYNAMIC PSYCHOLOGY. An Introduction to Modern Psychological Theory and Practice. By Dom Thomas Verner Moore, Ph.D., M.D., Professor of Psychology, Catholic University of America. Cloth. Price, $3. Pp. 444, with 6 illustrations. Philadelphia: J. B. Lippincott Company, 1924.

Written primarily for students of psychology, this book presents in readable and simple form an excellent review of the general principles of dynamic psychology. The material is illustrated with examples from the author's experience, and there is wide reference to literature. The methods of studying mental conditions are given in considerable detail, and there is a brief review of the major formulations of psychanalytic material in readily intelligible language. The last chapters of the book are devoted to a detailed criticism of the conceptions of will, mostly of a highly technical character, which seems quite out of place in an elementary work of this kind and is obviously designed for the purpose of proving that there is a will; also that this will issues "fiats," though on what basis the choice is made is not explained; the impulses and desires used so admirably in the earlier chapters are apparently insufficient. The ecclesiastical interests of the author are still further evidenced by the final chapter on the soul. There is also, perhaps, somewhat too much reference to disease processes in technical terms for the student of elementary psychology, but this is no disadvantage to one who has had a medical training, and the physician and medical student will find the book valuable and interesting.

LEFTHANDEDNESS. A New Interpretation. By Beaufort Sims Parson. Foreword by Harvey E. Jordan, A.M., Ph.D., Professor of Histology and Embryology in the University of Virginia. Cloth. Price, $2. Pp. 185, with 10 illustrations. New York: The Macmillan Company, 1924.

The author discusses each of nine theories that have been advanced to explain the predominance of right-handedness, and finds none of them wholly satisfactory. The advantages of specialization of one member would account for handedness; the original impulse to prefer the right to the left hand is sought. Handedness is accompanied by a peculiarity of our vision: Sighting is by the right or left visual line, not the median line. Contiguous areas of the brain have assumed dominance in the control and correlation of precise vision, fine manual procedures, including writing, and the closely related function, speech. This observation is of value in determining native left-handedness which has become masked by the attempt to adjust handedness to the condition of the majority. A test of the eye used in sighting will, in most cases, reveal the perferred hand. The author has designed an apparatus for this purpose, and finds that nearly one third of persons tested are natively left-handed, a finding corroborated in doubtful cases by a careful inquiry into the early history or by the observation of the use of the hands.

PRINCIPLES AND PRACTICE OF ROENTGEN THERAPY. By I. Seth Hirsch, M.D., Director, X-Ray Departments, Bellevue and Allied Hospitals. With Dosage Formulae and Dosage Table. By Guido Holzknecht, M.D., Professor of Roentgenology, University of Vienna. Cloth. Price, $15. Pp. 359, with 272 illustrations. New York: American X-Ray Publishing Company, 1925.

This is perhaps the most complete presentation in English of everything known concerning roentgen-ray therapy. The first chapters, devoted to the explanation of the electrical principles governing the production of the necessary electrical currents, are followed by a minute and clear description of the apparatus employed for this purpose. Highly instructive is the chapter dealing with the measurement of high tension voltage. This is followed by the description of all types of the therapeutic tubes, including the latest developments. The additional equipment of a therapeutic station is described, and the same accuracy is employed in discussing all the protective methods and appliances. The measurements of the roentgen rays as to quality and intensity are also extensively covered. A useful feature of the presentation is a summary to each chapter recounting in concise form all the practical points to be derived from the technical considerations. Great stress is laid on the necessity of an exact dosage of the roentgen rays administered, and the means enabling the operator to live up to this demand. The closing chapter contains the dosage formulas and tables originating with Holzknecht.

CUESTIONES GASTROENTEROLÓGICAS. Por Luis Urrutia. Primera Serie. Paper. Price, 8 pesetas. Pp. 180, with 18 illustrations. Madrid: Editorial Paracelso, 1924.

After preparing his trilogy on diseases of the stomach, intestine, and liver and pancreas, the author has now compiled some material which would not quite fit into the previous volumes, or which he wanted to discuss more at length. The subjects include: pulmonary complications after 1,000 laparotomies; mega-esophagus; types of chronic gastritis; resection of justacardiac ulcers; duodenal and pancreatic ulcer following gastrectomy; megacolon; appendicitis resembling angina pactoris; nonlithiasic cholecystitis; open hydatid cysts in the gallbladder, and accessory pancreas. Each condition is treated with this gastro-enterologist's usual thoroughness, both with reviews of the literature and with illustrations from his own practice.

Medicolegal

Chiropractic College Liable for Injuries by Students

(Carver Chiropractic College v. Armstrong (Okla.), 229 Pac. R. 641)

The Supreme Court of Oklahoma, in affirming a judgment in favor of plaintiff Armstrong for $1,000 damages for the alleged fracture of two ribs and the tearing loose of some cartilage connecting ribs with the sternum while she was being treated by one of the defendant's students in a clinic, says that private hospitals and colleges created and incorporated for profit and gain are governed by entirely different rules of law from charitable institutions. The jury was instructed in this case that if it found and believed from the evidence that the defendant was operating a clinic in which patients were treated by students for a nominal fee, the plaintiff, if she knew these facts and went there for such treatment, would not, under the law, have a right to expect the highest degree of skill. This, the court thinks, was a correct application of the law, and was the most favorable construction that could be given to the law as applied to the defendant.

The defendant in this case was a college, and operated a clinic in connection with its school wherein was taught a science concerning the treatment of physical ailments and maladies; and while the court has found no authority that places chiropractic in the same class as other well known and reputable schools of medicine and surgery, the court thinks it should be governed by the same rules of law as other sciences and professions taught and maintained for similar purposes. The practice of this science should be governed by the same rules of law as the homeopath and the allopath and other schools of medicine, and in dealing with the defendant in this light a more strict and rigid rule was applicable, possibly, than in dealing with hospitals and sanatoriums. At least, the court thinks that, in passing on the question here involved, it should take into consideration the relationship of patient and physician. The court might quote at great length concerning the relationship of physician and patient, and the degree of care and the duty that the physician owes his patient. These are good and wholesome rules of law, and no reputable physician, surgeon or practitioner of any science looking to the cure of disease and relief of those who are ailing should object to the high standard that is required of the physician in the discharge of his duty to his patient.

The court knows from experience and observation that the reputable practitioner does not object to the standards established, but, in fact, indorses them. Many of the laws regulating, controlling and setting such standards have been fostered by the profession. And while there may be some question as to whether or not rules of law applicable to the old and established schools of medicine and surgery are applicable to the chiropractor, in the judgment of this court they are; and, while the rules announced are not directly

applicable to the case at bar, the court thinks that by analogy it can properly apply the same to this case in justice to all concerned.

The court takes it that the student charged with administering the treatment to the plaintiff would be termed an intern in the regular schools of medicine. It is fair to presume that the authorities in charge of the defendant institution believed that he was capable of administering treatment with a reasonable degree of skill, and the court thinks that the college should be held liable and responsible for the acts and conduct of those whom they place in charge of patients entering the institution for treatment, regardless of whether the treatment is gratuitous or otherwise. A clinic, as an adjunct to a college of this character, is a necessary and essential part of the institution, and is maintained, not for the benefit of charity, but for the benefit of the institution and its students. The institution is a private corporation created for business purposes and for profit, and while those who practice and believe in the science may feel that it is an institution in the nature of a public beneficiary and should be regarded in the same light as charitable institutions, the law does not so consider it, and in the judgment of this court the institution is clearly liable for any negligence or lack of ordinary care on the part of its servants, employees and students who are placed in charge of persons entering the institution for treatment. Should a patient receive such injuries as were here complained of when under the treatment of a regular physician, or of a student or intern in a clinic of one of the regular schools of medicine and surgery, there would be no question as to liability.

Subjective Symptoms as Basis of Expert Evidence

(Hutchinson v. Jersey Central Traction R. Co. (N. J.), 126 Atl. R. 482)

The Supreme Court of New Jersey says that among the injuries of which the plaintiff complained as a result of an accident attributed to the defendant's negligence and for which he sought to recover damages was a defect in hearing, described by him as a "ringing in the ears." On this branch of the case he called as an expert witness a physician who had made, on the day preceding the trial, an examination of the plaintiff, for the sole purpose of testifying at the trial. The witness testified that he had made a series of tests to establish whether the plaintiff had normal hearing, and whether his auditory nerve was normal, but that he was unable to reach a conclusion on these matters without the aid of subjective symptoms. Over objection, this witness was permitted to testify as to the result of his examination, using in the result reached the statements of the plaintiff. In the opinion of the supreme court the testimony of the physician, so far as it included statements made to him by the plaintiff as to the latter's symptoms and opinions, based in whole or in part thereon, was inadmissible and should not have been allowed to go to the jury. Its admission was clearly prejudicial to the defendant. As stated above, the examination made by the physician was for the sole purpose of testifying at the trial. It was made on the day preceding the trial. It would be difficult to find a case in which the motive for exaggeration of subjective symptoms would be stronger.

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION, Atlantic City, N. J., May 25-29. Dr. Olin West, 535 North Dearborn Street, Chicago, Secretary.

Alabama, Medical Association of the State of, Birmingham, April 21-24. Dr. D. L. Cannon, 519 Dexter Avenue, Montgomery, Acting Secretary.

American Association for the Study of Allergy, Atlantic City, May 26. Dr. W. W. Duke, Federal Reserve Bank Bldg., Kansas City, Mo., Sec'y.

American Association for the Study of Goiter, Atlantic City, May 26. Dr. J. D. Moschelle, Odd Fellows Bldg., Indianapolis, Ind., Secretary.

American Association of Genito-Urinary Surgeons, Washington, D. C., May 4-6. Dr. Henry G. Bugbee, 40 East 41st St., New York, Sec'y.

American Climatological and Clinical Association, Washington, D. C., May 4-5. Dr. Arthur K. Stone, Framingham Center, Mass., Secretary.

American Dermatological Association, Washington, D. C., May 4-6. Dr. Udo J. Wile, 9 Geddes Heights, Ann Arbor, Mich., Secretary.

American Gastro-Enterological Association, Atlantic City, May 25-26. Dr. John Bryant, 338 Marlborough Street, Boston, Secretary.

American Gynecological Society, Washington, D. C., May 4-6. Dr. Arthur H. Curtis, 104 South Michigan Avenue, Chicago, Secretary.

American Laryngological Association, Washington, D. C., May 4-6. Dr. George M. Coates, 1811 Spruce Street, Philadelphia, Secretary.

American Laryngological, Rhinological and Otological Society, Atlantic City, May 22-25. Dr. R. L. Loughran, 145 West 58th Street, New York, Secretary.

American Neurological Association, Washington, D. C., May 5-6. Dr. Frederick Tilney, 870 Madison Avenue, New York, Secretary.

American Ophthalmological Society, Washington, D. C., May 5-6. Dr. T. B. Holloway, 1819 Chestnut Street, Philadelphia, Secretary.

American Orthopedic Association, Washington, D. C., May 5-6. Dr. DeForest P. Willard, 1630 Spruce Street, Philadelphia, Secretary.

American Otological Society, Washington, D. C., May 4-5. Dr. T. J. Harris, 104 East 40th Street, New York, Secretary.

American Pediatric Society, Washington, D. C., May 4-6. Dr. H. C. Carpenter, 1805 Spruce Street, Philadelphia, Secretary.

American Proctologic Society, Atlantic City, May 25-26. Dr. J. F. Montague, 540 Park Avenue, New York, Secretary.

American Psychiatric Association, Richmond, Va., May 12-15. Dr. E. D. Bond, 4401 Market Street, Philadelphia, Secretary.

American Psychopathological Association, Washington, D. C., May 7. Dr. Sanger Brown, 2d, 173 East 70th Street, New York, Secretary.

American Society of Clinical Investigation, Washington, D. C., May 4. Dr. J. H. Austin, University of Pennsylvania, Philadelphia, Secretary.

American Society of Clinical Pathologists, Philadelphia, May 20-23. Dr. Ward Burdick, Metropolitan Building, Denver, Secretary.

American Society of Tropical Medicine, Washington, D. C., May 5-6. Dr. B. H. Ransom, P. O. Box 131, Pennsylvania Avenue Station, Washington, D. C., Secretary.

American Surgical Association, Washington, D. C., May 4-6. Dr. Robert B. Greenough, 8 Marlborough Street, Boston, Secretary.

American Therapeutic Society, Atlantic City, N. J., May 21-22. Dr. L. H. Taylor, The Cecil, Washington, D. C., Secretary.

American Urological Association, St. Louis, May 21-23. Dr. H. G. Hamer, Hume-Mansur Building, Indianapolis, Secretary.

Arkansas Medical Society, Little Rock, May 13-15. Dr. William R. Bathurst, 810 Boyle Building, Little Rock, Secretary.

Association for the Study of Internal Secretions, Atlantic City, May 26. Dr. F. M. Pottenger, Title Insurance Bldg., Los Angeles, Secretary.

Association of American Physicians, Washington, D. C., May 5-7. Dr. Thomas McCrae, 1929 Spruce Street, Philadelphia, Secretary.

California Medical Association, Yosemite National Park, May 18-21. Dr. Emma W. Pope, Balboa Building, San Francisco, Secretary.

Conference of State and Provincial Health Authorities, Montreal, Canada, June 4-5. Dr. Richard M. Olin, State Commissioner of Health, Lansing, Mich., Secretary.

Congress of Physicians and Surgeons of North America, Washington, D. C., May 5-6. Dr. W. R. Steiner, 646 Asylum Avenue, Hartford, Conn., Secretary.

Connecticut State Medical Society, Bridgeport, May 20-21. Dr. Charles W. Comfort, Jr., 27 Elm Street, New Haven, Secretary.

Georgia, Medical Association of, Atlanta, May 13-15. Dr. A. H. Bunce, 65 Forrest Avenue, Atlanta, Secretary.

Hawaii, Medical Society of, Honolulu, April 24-27. Dr. Forest J. Pinkerton, 43-46 Young Building, Honolulu, Secretary.

Illinois State Medical Society, Quincy, May 19-21. Dr. Harold M. Camp, Lahl Building, Monmouth, Secretary.

Iowa State Medical Society, Des Moines, May 13-15. Dr. T. B. Throckmorton, Bankers Trust Building, Des Moines, Secretary.

Kansas Medical Society, Topeka, May 5-7. Dr. J. F. Hassig, 804 Elks Building, Kansas City, Secretary.

Louisiana State Medical Society, New Orleans, April 21-23. Dr. P. T. Talbot, 1551 Canal Street, New Orleans, Secretary.

Maryland, Medical and Chirurgical Faculty of, Baltimore, April 28-30. Dr. J. A. Chatard, 1211 Cathedral Street, Baltimore, Secretary.

Massachusetts Medical Society, Boston, June 9-10. Dr. W. L. Burrage, 182 Walnut Street, Brookline, Secretary.

Medical Library Association, Atlantic City, May 25-26. Miss H. Wilson, 535 N. Dearborn Street, Chicago, Secretary.

Medical Women's National Association, Atlantic City, May 25-26. Dr. B. M. Haines, Michigan Department of Health, Lansing, Secretary.

Minnesota State Medical Association, Minneapolis, April 27-29. Dr. E. A. Meyerding, 717 Commerce Building, St. Paul, Secretary.

Mississippi State Medical Association, Biloxi, May 12-14. Dr. T. M. Dye, McWilliams Building, Clarksdale, Secretary.

Missouri State Medical Association, Kansas City, May 5-7. Dr. E. J. Goodwin, 901 Missouri Theatre Building, St. Louis, Secretary.

National Association for the Study of Epilepsy, Richmond, Va., May 11-12. Dr. A. L. Shaw, 44 Church Street, Camden, N. Y., Secretary.

Nebraska State Medical Association, Lincoln, May 12-14. Dr. R. B. Adams, 1012 Terminal Building, Lincoln, Secretary.

New Hampshire Medical Society, Manchester, May 19-20. Dr. D. E. Sullivan, 7 North State Street, Concord, Secretary.

New York, Medical Society of the State of, Syracuse, May 12-14. Dr. E. L. Hunt, 17 West 43d Street, New York, Secretary.

North Carolina, Medical Society of the State of, Pinehurst, April 28-30. Dr. L. B. McBrayer, Southern Pines, Secretary.

North Dakota State Medical Association, Fargo, May 18-19. Dr. Alex. J. McCannel, Minot, Secretary.

Ohio State Medical Association, Columbus, May 5-7. Mr. Don K. Martin, 131 East State Street, Columbus, Executive Secretary.

Oklahoma State Medical Association, Tulsa, May 12-14. Dr. C. A. Thompson, 308 Barnes Building, Muskogee, Secretary.

Radiological Society of North America, Atlantic City, N. J., May 22-23. Dr. Robert J. May, 5005 Euclid Avenue, Cleveland, Secretary.

Rhode Island Medical Society, Providence, June 4. Dr. J. W. Leech, 369 Broad Street, Providence, Secretary.

Society of Neurological Surgeons, New York, May 1-2. Dr. Ernest Sachs, Washington University Medical School, St. Louis, Secretary.

South Carolina Medical Association, Spartanburg, April 21-23. Dr. E. A. Hines, Seneca, Secretary.

Tennessee State Medical Association, Nashville, April 21-23. Dr. J. F. Gallagher, Jackson Building, Nashville, Secretary.

Texas, State Medical Association of, Austin, May 5-7. Dr. Holman Taylor, 207½ West 11th Street, Fort Worth, Secretary.

West Virginia State Medical Association, Bluefield, June 9-11. Mr. Sterritt O. Neale, 211 Smallridge Bldg., Charleston, Executive Sec'y.

Current Medical Literature

AMERICAN

The Association library lends periodicals to Fellows of the Association and to individual subscribers to THE JOURNAL for a period of three days. No foreign journals are available prior to 1920, nor domestic prior to 1923. Requests should be accompanied by stamps to cover postage (6 cents if one and 12 cents if two periodicals are requested).
Titles marked with an asterisk (*) are abstracted below.

American Journal of Obstetrics and Gynecology, St. Louis

9: 151-294 (Feb.) 1925

*Pneumonia in Stillborn and New-Born. W. C. Johnson and J. R. Meyer, New York.—p. 151.
*Control of Eclampsia Convulsions by Intraspinal Injections of Magnesium Sulphate. B. H. Alton and G. C. Lincoln, Worcester, Mass. —p. 167.
*Intravenous Use of Magnesium Sulphate in Puerperal Eclampsia. E. M. Lazard, Los Angeles.—p. 178.
*Radical and Conservative Treatment of Eclampsia. K. M. Wilson, Baltimore.—p. 189.
*Recurrent Toxemia of Pregnancy. F. S. Kellogg, Boston.—p. 197.
*Wassermann Test. IX. Detection of Syphilis in Prenatal Clinics. D. L. Belding, Boston.—p. 203.
Two Cases of Myeloid Leukemia Complicated with Pregnancy: Treated with Radium. J. O. Bower and J. H. Clark, Philadelphia.—p. 207.
Impetigo in New-Born: Two Hundred and Twenty-Four Cases. H. S. McCandlish, New York.—p. 228.
Dysmenorrhea at Goucher College. S. E. Van Duyne, Baltimore.—p. 234.
Recent Advances in Our Knowledge of Obstetrics and Their Bearing on Obstetrics as Specialty. A. J. Skeel, Cleveland.—p. 239.
Institutional Antepartum Methods Applied to Private Practice. J. A. Harrar, New York City.—p. 243.
*Malignant Endothelioma of Perithelioma Type in Ovary. E. F. Schmitz, St. Louis.—p. 247.
Contractions of Nonpregnant Multiparous Human Uterus. M. P. Rucker, Richmond, Va.—p. 255.
Pregnancy with Hymen Intact. N. Schilling, New Hampton, Iowa.—p. 258.
*Torsion of Pedicle of Ovarian Cysts. F. Helvestine, Jr., Charlottesville, Va.—p. 259.

Pneumonia in Stillborn and New-Born.—The ninety-seven cases analyzed by Johnson and Meyer include nonviable fetuses, stillborn and new-born infants. These cases occurred in a consecutive series of 500 necropsies. In many of these the pneumonia was not the sole or chief cause of death. Sixty-eight, or 13.6 per cent., were probably infected before birth. Congenital pneumonia, due to antenatal infection, is an important complication of birth, and an exceedingly frequent cause of mortality in the stillborn and new-born. The great majority of these cases are apparently due to aspiration of infected amniotic fluid following infection of the amniotic sac after premature rupture of the membranes. Cases of infection of the amniotic sac during dry labor are not usually clinically septic. The danger of the infection is disproportionately greater for the child than for the mother. The authors suggest that a study of the condition of the vagina and cervix preceding labor may indicate the line of attack in prophylaxis of this complication. Furthermore, all necropsies on the stillborn and new-born should include an examination of the placenta, cord and membranes. A knowledge of the means of identification of amniotic fluid aspirated within the lungs is important for the study of fetal asphyxia and congenital pneumonia. The presence of a large amount of amniotic fluid within the lungs is an indication of fetal asphyxia. Aspiration of uncontaminated amniotic fluid does not usually produce an inflammatory reaction. A special type of asphyxia neonatorum, with or without inflammatory reaction, is apparently due to antepartum aspiration of amniotic fluid containing epidermal cells and fat of the vernix caseosa. In death from postnatal infection, occurring frequently in premature infants, a frequent source is aspiration of food.

Magnesium Sulphate Intraspinally in Eclampsia.—Encouraged by the results of the various experiments on the control of convulsions in strychnin poisoning by the intradural injection of magnesium sulphate, Alton and Lincoln tested the effect of this salt, given in the same manner, in four cases of convulsions of eclampsia. The salt was not used until a thorough eliminative treatment had failed to control the convulsions. After each injection of magnesium sulphate the convulsions immediately ceased. The minimum time in which convulsions were controlled was eighteen hours. Two patients recovered. In the remaining two cases the convulsions were stopped by the treatment, but death resulted from the toxemia. One patient was in coma when admitted to the hospital. Her condition seemed hopeless from the beginning, and she did not regain consciousness before death. However, the magnesium sulphate controlled the convulsions. The necropsy findings in another case show that the patient had previously suffered considerable damage in several organs which probably brought about her death. The amount of magnesium sulphate was 1 c.c. of a 25 per cent. solution to each 25 pounds of weight. With larger doses of this salt the respiratory center is depressed and respirations may cease, but the heart action and pulse are unaffected. In cases of respiratory failure following an overdose of magnesium sulphate, 10 c.c. of a 25 per cent. calcium chlorid solution given intravenously will have a balancing action on the magnesium salts. When respiratory failure occurs, artificial respiration should be started immediately and continued until normal respirations are established.

Magnesium Sulphate in Puerperal Eclampsia.—Lazard has given intravenous injections of a 10 per cent. solution of magnesium sulphate in seventeen cases of eclampsia with but one maternal death. Other eliminative measures, such as phlebotomy, stomach lavage, colonic flushings with glucose and soda, and the administration of castor oil are carried out as in the treatment of any toxemic condition. All of the cases treated were of the profoundly toxic type.

Treatment of Eclampsia.—The data on 247 cases reviewed by Wilson showed that the end-results in the treatment of antepartum and intrapartum eclampsia are twice as good under conservative as under radical treatment. Those cases do best which are subjected to a minimal amount of obstetric interference. Chief reliance is to be placed on free venesection combined with the use of morphin in moderate doses. The performance of cesarean section as a routine procedure in the treatment of eclampsia is discouraged.

Recurrent Toxemia of Pregnancy.—Kellogg believes that about 14 per cent. of women showing symptoms in one pregnancy, often to the point of fetal loss or forcing delivery, not having chronic nephritis, will tend to show such symptoms in another pregnancy, and that in at least one half of these, such symptoms and such results can be prevented by excessive prenatal care.

Detection of Syphilis in Prenatal Clinic.—A tentative plan for facilitating the detection of syphilis in prenatal clinics is outlined by Belding. Its success depends on the proper coordination of laboratory and clinical examinations, and recognition of the limitations of each as applied to maternity patients.

Malignant Endothelioma in Ovary.—A diagnosis of malignant endothelioma of perithelioma type in the ovary was based by Schmitz on necropsy and microscopic evidence. It is a growth which tends toward a sarcomatous and carcinomatous type in one and the same section, which arises from the endothelium of the lymphatics, arranges itself in concentric, perivascular cell groups, has the polyhedral or cuboidal, always polymorphic cell type, and is of a malignant character. The arrangement in whorls or chains, the tendency to formation of vacuoles which coalesce to form new spaces, seemingly lined by tumor cells, all these points seem to indicate that the diagnosis of malignant endothelioma of perithelioma type, is justified.

Torsion of Pedicle of Ovarian Cyst.—Eighteen cases are analyzed by Helvestine. Pain was the most constant symptom. It was present in all cases. Some distention of the lower abdomen was noted in fifteen cases. Tenderness, usually localized, was found in all patients. A mass was palpable on both abdominal and pelvic examination in sixteen, or 88.8 per cent. The temperature in the cases without infection varied from normal to 101.5 F., leukocytes from 8,000 to 20,400. The temperature was above 100 F. and the leukocytes above 10,000 in 64 per cent. of the cases. Exami-

nation of the urine for the most part showed nothing abnormal. Fourteen, or 78 per cent., of the patients gave a history of previous attacks. All of the patients in this series were operated on. There were no deaths, and the postoperative course in the majority was uneventful. Pregnancy, where it was found as a complication, was in no instance interrupted.

Boston Medical and Surgical Journal

192: 427-468 (March 5) 1925

Acute (Nontraumatic) Abdomen. J. B. Deaver, Philadelphia.—p. 427.
Liver Function. I. Methods for Determining Concentration of Bile Acids and of Pigments Present in Duodenal Contents. C. W. McClure, E. Vance and M. C. Greene, Boston.—p. 431.
*Liver Function. II. Concentrations of Cholesterol, Bile Acids and Pigments of Duodenal Contents in Health and in Diseases of Liver and Its Ducts. C. W. McClure and E. Vance, Boston.—p. 433.
Correlation of Official and Unofficial Health Angencies in Public Health Program. C. F. Wilinsky, Boston.—p. 438.
Value of Osteopathic Adjustment in Asthmatic Bronchitis. W. P. Murphy and P. T. Wilson, Boston.—p. 440.

Liver Function.—In interpreting their experimental data McClure and Vance point out that two main sources of error must constantly be considered. First, the work demonstrates that magnesium sulphate does not stimulate uniformly a rather small percentage of normal livers. Secondly, the liver possesses manifold and complex functions; and, in addition, the interpretation of the experimental results is complicated by the rôle possibly played by the gallbladder and secretions of the pancreas or stomach modifying the bile of duodenal contents. Nevertheless, the findings indicate that the bile of duodenal contents, obtained after lavage with magnesium sulphate solution, undergoes very little modification as the result of action on the part of the gallbladder. The findings indicate that magnesium sulphate, introduced into the duodenum, may affect the functional state of the liver. Liver function, as measured by the procedures employed, was found to be deranged in lesions involving either the parenchyma of the liver or its blood supply and in chronic cholecystitis.

Canadian Medical Association Journal, Montreal

15: 123-242 (Feb.) 1925

Importance of Second Thoughts in Management of Some Common Maladies. E. L. Pope.—p. 123.
Mucous Cyst of Cecum (Congenital); Primary Intussusception. A. T. Bazin, Montreal.—p. 130.
Pigmented Hairy Nevus of Nose, with Pigmented Hairy and Warty Nevus of Cheek and Lip. Multiple Autoplasty; Cure. J. N. Roy, Montreal.—p. 138.
Surgical Headache. A. R. Campbell and C. K. Fuller, Yarmouth, N. S.—p. 144.
Newer Methods of Treating Skin Diseases. L. J. Carter, Brandon, Man.—p. 148.
*Nature and Classification of Leukemias. T. R. Waugh, Montreal.—p. 153.
Management of Visceroptosis. R. H. M. Hardisty, Montreal.—p. 158.
*Bismuth in Syphilis. F. Green, Montreal.—p. 163.
Hormone of Oestrus. W. Bourne, Montreal.—p. 171.
Low Systolic Blood Pressure. A. V. Greaves, Toronto.—p. 174.
Iodid and Bromid Eruptions. J. F. Burgess, Montreal.—p. 178.
Dermatitis Factitia: Case. G. G. Campbell, Montreal.—p. 180.
Carcinoma of Cecum. A. J. Grant, London, Ontario.—p. 182.
Carcinoma of Transverse Colon with Partial Destruction of Bowel Wall and Perforation of Branch of Midcolic Artery. J. O. Fraser, Montreal.—p. 183.
Unusual Uterine Polyp. J. S. Henry, Montreal.—p. 184.
Purpura Hemorrhagica: Death Due to Cerebral Hemorrhage: Case. F. D. Ackman, Montreal.—p. 186.
Hyperplasia of Thyroid in an Infant. H. G. Grieve, Winnipeg.—p. 187.
General Edema of Fetus. W. E. Tew.—p. 188.

Classification of Leukemia.—The various pathologic processes of the hematopoietic tissues which are of a progressive leukoplastic nature, are divided by Waugh into four groups, hyperplasias, kataplasias, dysplasias and neoplasias. These subdivisions are the same for both branches of the system, i. e., whether lymphoid or myeloid.

Bismuth in Syphilis.—Green's experience with bismuth in syphilis has been that in primary syphilis the drug has a slow spirocheticidal action as compared with arsphenamin, the spirochetes being found in the lesion after the third and fourth injections. In primary and secondary syphilis, bismuth has a slower action than arsenic on reducing the strength of the Wassermann reaction. On account of its slow action in primary and secondary syphilis, bismuth ought not to be used in the abortive treatment of syphilis; in cases of latent syphilis already extensively treated with arsenic and mercury and which are Wassermann-fast, bismuth seems to have a great advantage over the other specifics in changing in a very short time the Wassermann reaction from positive to negative, although mercuro-arseno-bismuth Wassermann-fast cases also exist. Bismuth in conjunction with arsphenamin seems to be more effective than mercury plus arsphenamin in changing the Wassermann reaction from positive to negative. Bismuth seems to be of great help in relieving the pain of patients with tabes.

Missouri State Medical Association Journal, St. Louis

22: 47-78 (Feb.) 1925

Upper Urinary Obstruction; Medical Aspects. J. C. Lyter, St. Louis. Id. Surgical Aspects. N. Moore, St. Louis.—p. 50.
*Creatinin Test for Renal Function. R. H. Major, Kansas City.—p. 54.
Management and Results of Deep Therapy in Tumors of Bladder and Prostate. P. C. Schnoebelen, St. Louis.—p. 57.
*Some Experiences with Meningitis and Description of New Sign. T. W. White, St. Louis.—p. 59.
Two Years' Practical Experience with Quartz Light in Children's Diseases. J. Zahorsky, St. Louis.—p. 61.

Creatinin Test for Renal Function.—The principle underlying the creatinin test consists in the estimation of the creatinin excretion by the patient before and after the introduction of creatinin into the circulation. Major has modified the technic from time to time. In normal subjects when this test is carried out, the kidneys, in the hour following the injection, excrete from two to three times as much creatinin as was excreted before injection. During the second hour after injection from 50 to 100 per cent. more is excreted than during the preinjection hour. Similar curves were obtained on patients suffering from essential hypertension, diabetes mellitus and various other diseases with no renal involvement. In chronic nephritis the creatin excretion the hour after injection showed, as a rule, only a slight rise over that of the preinjection period. In some cases of severe nephritis, the curve of creatinin excretion, instead of showing a sharp peak following injection like that of a normal individual, showed, on the contrary, a fall, an inverted peak as it were. This type of curve is apparently of some prognostic import. It has been found in severe human nephritis and in experimental uranium nephritis when the creatinin test is carried out every day; it appears in animals during the second and third day after administration of uranium, at the time when the nephritis reaches its maximum intensity.

New Sign of Meningitis.—The new sign of meningitis described by White is that rigidity of the dorsal and lumbar spine appears very early in the disease. During an epidemic of meningitis at Camp Mills it was noted that when the patient was seated on the side of the regulation army hospital bed the rather weak springs would sag with his weight leaving the knees elevated above his hips. The position naturally assumed by one so seated is that of leaning with the elbows resting on the thighs and the body leaning slightly forward. It was observed that those suffering with meningitis would rest the forearm only on the thigh while the back would maintain a very erect soldierly carriage. This posture has been observed in a case diagnosed as epidemic encephalitis, and in a child following repeated convulsions during a respiratory infection, in both of which normal spinal fluid under pressure was obtained. It would probably be present in any condition causing increased intraspinal pressure. While not pathognomonic of meningitis it appears very early and should be an aid in early diagnosis.

Radiology, St. Paul

4: 83-172 (Feb.) 1925

Roentgenologic Visualization of Gallbladder by Use of Intravenous Injections of Sodium Tetrabromphenolphthalein. E. A. Graham, W. H. Cole and G. H. Copher, St. Louis.—p. 83.
Roentgen Ray as an Aid in Artificial Pneumothorax. O. W. McMichael, Chicago.—p. 89.
*Niche as Roentgen-Ray Sign of Duodenal Ulcer. J. S. Diamond, New York.—p. 93.
Radioactivity. J. Muir, New York.—p. 101.
Syphilis of Spine. R. B. Cofield, Cincinnati.—p. 104.
Appendicitis and Lesions Complicating Its Diagnosis: Deductions from Roentgen-Ray Examinations. S. B. Childs, Denver.—p. 107.

Possibilities of Deep Roentgen-Ray Therapy with Coolidge Watercooled Tube and Heavier Transformers. R. E. Fricke, Baltimore.—p. 111.
Advanced Trouble Shooting. C. B. Horsley, Pittsburgh.—p. 116.
Recent Roentgenographic Findings in Cases of Severe Gunshot Wounds Received During World War. W. I. LeFevre, Cleveland.—p. 118.
Idiopathic Eventration of Diaphragm. M. I. Bierman, Washington, D. C. —p. 122.
Radiation Treatment of Malignancy of Eyeball. G. W. Grier, Pittsburgh. —p. 125.
New Method for Making Radiograms of Cervical Vertebrae in Lateral Position. C. C. Grandy, Fort Wayne, Ind.—p. 128.
Unusual Position of an Open Safety Pin in Esophagus. P. P. Vinson, Rochester, Minn.—p. 129.
Calcified Areas in Abdominal Cavity: Six Cases. C. G. Sutherland, Rochester, Minn.—p. 130.
Radiographic Technic. R. J. Maier, Chicago.—p. 133.

Roentgen-Ray Diagnosis of Duodenal Ulcer.—A roentgen-ray study of forty-two cases of duodenal ulcer is reported by Diamond. He says that with the proper method of examination, the duodenal niche becomes the outstanding roentgen-ray deformity of duodenal ulcer. It has been found in twenty-eight cases (66.6 per cent.) of this series. The duodenal defect, hitherto regarded as the result of organic changes only, appears to be, in the majority of instances, functional in character, and is associated with the niche. This defect can be lessened in size or made to disappear entirely when the duodenum is relaxed. A simple method is mentioned to relax the duodenum and facilitate the visualization of niches, as well as to aid in the differential diagnosis between functional and organic changes. After the preliminary examination, the patient is given 25 drops of tincture of belladonna, every four hours, for forty-eight hours, simultaneously restricting the diet to milk, and even alkalis when they are necessary. A marked relaxation of the pylorus and duodenum then ensues. The pylorus is seen gaping, and the duodenal lumen becomes widened and fills more completely. The spastic contractures become lessened or may disappear entirely, and the niche, which was not seen before, often makes its appearance on the lesser curvature.

Rhode Island Medical Journal, Providence

8: 19-34 (Feb. 1925

General Practitioner's Relation to Mental Medicine. A. H. Ruggles, Providence.—p. 22.

FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below. Single case reports and trials of new drugs are usually omitted.

British Medical Journal, London

1: 437-488 (March 7) 1925

Lethargic Encephalitis. C. M. H. Howell.—p. 437.
Antenatal Clinic. G. B. Smith.—p. 440.
*Thyroid and Manganese Treatment in Various Diseases. H. W. Nott. —p. 443.
*Peptone and Serum Peptone in Asthma. A. G. Auld.—p. 448.
*Mental Symptoms in Auricular Flutter. W. S. Dawson.—p. 450.
Panniculitis. W. Bain.—p. 450.
Congenital Megacolon with Absence of Vagina. H. Hartley.—p. 451.
*Treatment of General Paralysis by Malaria. T. W. Davidson.—p. 452.
*Congenital Nystagmus. T. S. Evans.—p. 453.
*Green Teeth Following Prolonged Jaundice in Infancy. J. Craig.—p. 453.
Nasal Diphtheria. F. D. Marsh.—p. 454.
*Shock Doses of Bacillus Coli Vaccine in Exophthalmic Goiter. A. C. Wilson.—p. 454.
Acute Calculous Cholecystitis and Malignant Disease. L. Rogers.—p. 454.
True Epispadias: Case. J. A. C. Macewen.—p. 454.

Thyroid Extract and Potassium Permanganate Treatment of Disease.—Nott reports on the results obtained in the treatment of a group of cases by means of rectal injections of a solution of pure potassium permanganate, of various strengths, given at various intervals, according to the severity of the infection or the length of time it has existed. The standard solution used is 1 grain of permanganate to 1½ pints of sterile warm water. In addition to these injections, thyroid extract is given on the basis that in many cases there is a thyroid deficiency. Another method of administering the potassium permanganate in an easily absorbable condition is by cachet. From one-eighth to half a grain of the pure powdered drug is enclosed in the smallest sized cachet. One is swallowed with half a pint of hot water on waking in the morning, when the stomach is empty; and four minutes later, when the cachet will have opened, another copious drink of hot water is taken. This is by no means so effectual as is the injection method. Nott has reports on 227 cases treated by himself and others. The type of cases treated included: pneumococcal meningitis; colon bacillus infection; arthritis; cardiac asthma and dropsy; angina pectoris; acute gout; colitis; chorea; goiter; infantile convulsions, etc.

Serum and Peptone Treatment of Asthma.—Auld reports eleven cases of asthma in which good results were obtained from treatment with peptone and serum peptone.

Mental Symptoms in Auricular Flutter.—In Dawson's case, mental confusion of several days' duration was present. The mental picture of this case was extremely suggestive of general paralysis, except that the symptoms disappeared as the condition of the heart improved. Visceral hallucinations, such as have been described by Head, were present. Intensive treatment with digitalin caused the vicious circle to be broken and converted the flutter into fibrillation, which, in turn, was followed by a normal rhythm when the drug was discontinued.

Treatment of General Paralysis by Malaria.—The malarial treatment of general paralysis was employed by Davidson in fifty-three cases. There resulted complete remission in seven cases; nine patients improved mentally and physically, and in seventeen there was slight mental betterment with improved physical health.

Congenital Nystagmus.—In Evans' series of cases, the mother had marked nystagmus of the lateral movement type, without rotary movements of the eyeballs or spasm of the eyelids. Her father and grandmother had suffered from a similar condition. Her one son and a daughter had marked nystagmus. Four daughters were free from the trouble. The son's daughter was also affected.

Green Teeth with Congenital Jaundice.—Craig reports the case of a child born jaundiced. The skin of the whole body and limbs was colored yellow, and so were the sclerotics. The jaundice continued to be intense and quite constant for three months, then it became gradually less, but it had not entirely disappeared until the child was 7 months old. With the exception of the prolonged jaundice and a "slight bronchitis every time she cut a tooth," the child has had no illness of any kind. The first tooth, a lower incisor, was cut at 9 months, and teeth appeared regularly after that. The first tooth "came in green," and all the others have done the same. The staining apparently is confined to the dentin, as the enamel at the cutting edges of the incisors seems to be free of stain. The staining approximates very closely to the amount of dentin that has been formed at the period just after birth.

Shock Doses of Colon Bacillus Vaccine in Exophthalmic Goiter.—In eighteen cases of exophthalmic goiter, Wilson injected colon bacillus vaccine. The dose was 500 million, six injections being given, one every seventh day. The benefit from the vaccine persisted long after the cessation of the injections. A cure is said to have been effected in every case. The vaccine treatment of simple goiter was less effective. Colon bacilli always appeared in the urine in these cases.

Edinburgh Medical Journal

32: 89-152 (March) 1925

Thoracoplasty. J. Fraser.—p. 89.
Tuberculosis Work in Edinburgh in Comparison with Antituberculosis Organization in Russia. A. Wladimiroff.—p. 99.
Tuberculosis in Cuba. J. P. Agostini.—p. 103.
Pulmonary Fibrosis, Tuberculous and Nontuberculous. W. L. Lyall.—p. 107.
*Direct Cultural Isolation and Early Cultural Investigation of Series of Strains of Tubercle Bacilli from Tuberculous Lesions in Animals. W. M. Cumming.—p. 115.

Isolating Tubercle Bacillus Strains.—By a process of grinding, straining and centrifugalizing, Cumming found it possible to isolate twenty-five strains of tubercle bacilli from the glands of twenty-eight tuberculous animals. All strains isolated had the characteristics described as "bovine" when grown in the second generation on glycerin egg medium.

Bulletin de l'Académie de Médecine, Paris

93: 201-219 (Feb. 24) 1925

*Devitalized Bone Implants. L. Imbert.—p. 204.
*Blood Alkalinity in Course of Immunization. Cluzet et al.—p. 215.
Isolation System in Children's Dispensaries. A. Lesage.—p. 217.

Bone Transplantation with Devitalized Grafts.—Two transplantations were made in dogs with calcined grafts; two with decalcified, one with the graft preserved in alcohol and three with boiled grafts. None of the devitalized implants succeeded. The calcined graft alone resisted resorption, while the grafts treated otherwise gradually disappeared, having been assimilated in the organism. Imbert concludes that only living, fresh implants should be used.

Changes in Alkalinity of Serum in Immunization.—Cluzet, Rochaix and Kofman's research on rabbits and horses showed that the p_H of normal blood serum, kept in hermetically closed vials, scarcely changed at all with time. In contact with air, the serum became gradually alkalized. A slight reduction of ionic alkalinity occurred in the initial stage of immunization against typhoid and dysentery bacilli. The hydrogen ion concentration in immunized animals was about the same as in the noninoculated animals of the same species.

Bulletin de l'Académie Royale de Médecine, Brussels

4: 629-686 (Nov. 29) 1924

*"Injury of Fetus by Irradiation." Committee Report.—p. 632.
"Mechanism of the Heart Rhythm." L. Fredericq et al.—p. 633.
*Surgery Plus Radium and Surgery for Access. Bayet.—p. 645.
The Fight Against Tuberculosis. Dandois.—p. 667.

Injury of Fetus by Roentgen-Ray Irradiation.—This committee report on a paper by de Courmelles states that the fact that the father was a syphilitic in some of the cases reported detracts from the value of the evidence in regard to the alleged "roentgen accidents."

Surgery Plus Radium.—Bayet's article was summarized in the Belgium Letter, March 14, 1925, p. 831. It is based on 742 cases of internal cancer, and the technic is illustrated. The most gratifying results were realized in cancer of the rectum. Radium needles—seventeen or more—were inserted in the tumor after excision of the coccyx, with longer needles at the top and bottom of the incision, and they were left in place for ten days.

Revue Médicale de la Suisse Romande, Geneva

45: 65-128 (Feb. 25) 1925

*Progressive Pernicious Anemia in Child. R. M. Tecon.—p. 65.
Bismuth Treatment of Syphilis. G. Cornaz.—p. 92.
Treatment of Varicose Veins by Injections Inducing Sclerosis. G. L. Regard.—p. 102.
Cause of Tumors. M. Marullaz.—p. 108.
The External Secretions in Prose and Poetry. R. Burnand.—p. 113.

Progressive Pernicious Anemia in Child.—Tecon reports a case of mild bronchitis and grave aplastic anemia, with fatal outcome, in a child, aged 6. The stools were normal and disclosed no pathologic state in the bowel or adjacent glands and there were no signs of congenital syphilis, tuberculosis or of toxic causes to explain the anemia. The clinical symptoms as much as the hematology led him to conclude that the case represented a cryptogenic progressive pernicious anemia. This instance and his observations in other cases of grave anemia in children indicate that in certain cases of pernicious and grave anemia the closest clinical examination fails to reveal any etiologic cause.

Schweizerische medizinische Wochenschrift, Basel

55: 157-180 (Feb. 19) 1925

*Pathologic Intoxication. R. Bing and S. Schoenberg.—p. 157.
*Bile in Metabolism. E. Herzfeld and A. Haemmerli.—p. 164. Conc'n.

Pathologic Intoxication.—Bing and Schoenberg report a few cases of pathologic intoxication from alcohol. Exertions, mental strain, heat, lack of sleep and food, and, above all, a neurotic constitution are predisposing factors. The amount of alcohol consumed is sometimes comparatively small. Brutal aggressiveness—especially provoked by the arrival of a policeman—destructive impulses, instinctive actions, and a deep sleep with almost complete amnesia follow. Interesting combinations with epileptic equivalents may occur.

Bile in Metabolism.—Herzfeld and Haemmerli found in dogs after ligation of the common bile duct that the biliary acids are excreted to a large extent by the bowel. The same occurs in mechanical jaundice in man. Dogs have no urobilinuria in the beginning nor at the end of a mechanical icterus. Jahn found 150 mg. of biliary acids per hundred cubic centimeters of cod liver oil. This may account for its easy resorption. The blood of four out of fifteen new-born infants contained biliary acids. This speaks for some lesion of the liver cell—not for destruction of erythrocytes—as the cause of jaundice of the new-born. The acids are also present in the urine in this jaundice, and regularly in the meconium. Normal human stools contain biliary acids only exceptionally. A larger proportion of them is excreted through the bowel than through the urine in mechanical icterus. They report the surprising finding of biliary acids in the blood in three patients with hemolytic jaundice. Nevertheless they believe in the existence of a dissociated icterus. The renal origin theory of urobilinuria is not well founded. The kidney only excretes the urobilin. The feces of healthy subjects contain on the average 0.50 gm. of urobilin per day. The amount is increased in pernicious anemia, hemolytic jaundice, grave infections such as sepsis, pneumonia, acute polyarthritis, paratyphoid, scarlet fever, pleurisy, appendicitis, febrile tuberculosis and diabetes. The amount of urobilin in the urine is not a reliable indicator of the degree of hemolysis. The test is good for revealing latent jaundice, especially in affections of the liver. The urobilinuria did not increase in liver insufficiency after ingestion of several decigrams of urobilin. There is no parallelism between the amounts of urobilin excreted by the urine and by the feces. They admit the histogenous theory of urobilin formation, but combine it with the enterohepatic theory.

Pediatria, Naples

33: 169-224 (Feb. 15) 1925

*Leishmaniasis. S. Maggiore.—p. 169.
*Vaccine Treatment in Measles. M. B. Sindoni.—p. 173.
*Therapeutic Vaccine in Measles. A. Ronchi et al.—p. 184.
*Treatment of Otogenous Meningitis. A. P. Missorici.—p. 195.
Intelligence Tests for Children. A. Laurinsich.—p. 208.

Leishmaniasis.—Maggiore inoculated cutaneously and intracutaneously cultures of *Leishmania tropica* and *donovani*, and material from patients with leishmaniasis. The results were negative. He believes that the parasites have to undergo a change in the intermediary host.

Vaccine Treatment in Measles.—Sindoni injected a vaccine, prepared by the action of convalescents' serum on the Italian cultures, in the beginning of the eruptive period of measles in eighteen children. She found that it shortened the course of the disease and prevented complications, with the exception of two instances of lobular pneumonia.

Therapeutic Vaccine in Measles.—Ronchi, Sabatini and Cartia report the changes of temperature, blood counts and opsonic index, repeatedly determined, in six patients treated with the measles vaccine mentioned in the preceding abstract.

Treatment of Otogenous Meningitis.—Missorici had good results with intraspinal injections of pneumococcus serum in otogenous meningitis, as an addition to surgical treatment. He also describes a gram-negative variety of pneumococcus.

Policlinico, Rome

32: 269-302 (Feb. 23) 1925

Fracture of the Clavicle. D. Taddei.—p. 269.
*Radiculitis and Trauma. E. Fossataro.—p. 272.
Tubercle of Right Lobe of Cerebellum. L. Tomasi.—p. 277.

Radiculitis and Trauma.—Fossataro reports a few cases of affections of the spinal nerve roots which caused disturbances attributed to peripheral injuries. Tenderness of the nerve roots, trophic disturbances of muscles arranged according to the nerve roots—not according to the peripheral nerves—and pain in passive movements which stretched the roots are characteristic signs. Arthritis of the three lower cervical vertebrae was the cause in one of his patients.

A. M. M., Mexico City

3: 667-760 (Jan.) 1925

*Prophylaxis of Rabies 1919-1924. Demetrio López.—p. 669.
*Prognosis of Sprains. R. González Hurtado.—p. 677.
*Hyperketonuria on Milk Diet. C. Zuckermann.—p. 683.
Medical Advertising. José Torres.—p. 686.
Jáuregui and Lancelotti's Serotherapy of Syphilis. T. G. Perrín.—p. 690.

Prophylaxis of Rabies in Mexico.—López is director of the Antirabies Institute at Mexico City, and has been influential in having branches established in eight other cities, and in the impounding of unmuzzled dogs. In the last six months of 1924, 4,350 dogs were taken off the streets of the federal capitol, and all but 159, reclaimed by their owners, were humanely killed. The number of persons under treatment averaged from 100 to nearly 144 daily before this, but since then the average has been only 48.3, and this includes applicants from all over the country.

Prognosis of Sprains.—González Hurtado relates that in his experience as police physician he found it extremely difficult to classify sprains and foretell the outcome. The prognosis was always graver than it seemed at first. It depends on the age, the general condition, lesions in or near the joint, and the infectious complications rather than on the sprain itself.

Hyperketonuria on Milk Diet.—In the eight cases described, the patients with scarlet fever, measles, typhoid, whooping cough or erysipelas were all on a milk diet, and all developed hyperketonuria.

Siglo Médico, Madrid

75: 1-28 (Jan. 3) 1925

Extraction of Cataract Capsule. Castresana.—p. 1. Conc'n, p. 30.
Irradiation Treatment of Uterine Cancer. Parache.—p. 4.
Cardiac Syndromes of Endocrine Origin. G. R. Gonzalo.—p. 6.
*Treatment of Hemophilia. B. and M. González Alvarez.—p. 109.

Hemophilia.—The arguments and data presented by González Alvarez sustain the view that hemophilia is the result of a congenital infection attacking the endothelium, and usually of syphilitic origin. Women are protected, he thinks, by some hormone, and he suggests treatment of hemophilia with ovarian extract, to simulate conditions as in the female, besides supplying the lacking thrombin artificially.

75: 109-132 (Jan. 31) 1925

Gallstone Colic and Its Treatment. Amalio Gimeno y Cabañas.—p. 109. Cont'd.
Irradiation Treatment of Uterine Cancer. Vital Aza.—p. 112.
*Indoxyluria and Trigeminal Neuralgia. Cesar Juarros.—p. 115.
Bacteriologic Diagnosis of Puerperal Infection. B. Pérez Velasco.—p. 116.
Pain Suggesting Angina Pectoris. G. R. Gonzalo.—p. 120.

Indoxyluria with Trigeminal Neuralgia.—Juarros called attention in 1920 to his success in treating trigeminal neuralgia by measures to put an end to the excess of indoxyl in the urine. He found indoxyluria present in 33 per cent. of all his cases of trigeminal neuralgia, and the indoxyl content increased under alkaline mineral waters. He accepts this as a sign of an intestinal or hepatic origin for the indoxyl; it does not vary, or it declines, when traceable to suppuration or metabolic derangement. He gives the details of four of the gravest in his series of seventeen cases. The neuralgia was of long standing, rebellious to all medical measures and electricity, but it was completely and promptly cured by a change to a vegetable diet with liver organotherapy. Recurrence in a few cases yielded anew to this treatment.

Archiv für Kinderheilkunde, Stuttgart

75: 161-240 (Feb. 10) 1925

*Treatment of Rickets. P. Reyher and M. Schmaucks.—p. 161.
Orthopedic Treatment of Spinal Paralysis in Children. J. Rey.—p. 173.
*Gries' Test for Cystopyelitis in Children. R. Wildmann.—p. 185.
*Test for Adulteration of Human Milk. H. Meyer.—p. 211.
Tetany in Infants. A. Bratusch-Marrain.—p. 225.

Comparative Study of Treatment with Diet, Sunlight or Ultraviolet Rays in Rickets.—Reyher and Schmaucks observed thirty-five cases of rickets under different treatment and the same seasonal influences for six months, a year or more. The higher vitamin content of the milk, vegetables, etc., during the summer explains the improvement at this season. The sunlight is only a subordinate factor. Pure dietetic treatment by vitamins resulted in good winter recoveries, while florid rachitis sometimes developed in midsummer on a deficient diet. They regard dietetic treatment as the logical treatment of rickets.

Color Test for Nitrites in Fresh Urine as Sign of Cystopyelitis.—Wildmann applied the Gries-Ilosvay reagent in diagnosis of cystopyelitis in children. The response was positive in his twenty-two fully developed cases, and was negative in the 158 other children tested, or was only exceptionally briefly weakly positive. A positive response calls for microscopic examination at once.

Test for Adulteration of Human Milk.—Meyer's hydrochloric acid method is for detection of addition of cow's or goat's milk or water, or both. It is based on the different flocculation and acid-binding properties of the milks, revealing addition to breast milk of even 5 per cent. of other milk or of 20 per cent. of water.

Archiv für Verdauungskrankheiten, Berlin

34: 131-274 (Jan.) 1925

*Resection of Pyloric Antrum. H. Schur and F. Kornfeld.—p. 131.
Problems in Tests of Stomach Secretion. H. Galewski.—p. 145.
Artificial Modification of Duodenal Secretion. M. Wichert and W. Dworjetz.—p. 158.
Cholesterol and Bilirubin Content of Duodenal Juice. Wichert and Russjajewa-Oparina.—p. 175.
Innervation of the Stomach Musculature. T. Bársony.—p. 188.
*Fasting and Purgative Treatment of Dysentery. T. Hausmann.—p. 193.
*Enterogenous Duodenal and Gastric Ulcers. A. Posselt.—p. 222.
"Peptic Ulcers and Pepsin Concentration." H. Kohler.—p. 272.

Effects of Resection of Pyloric Antrum.—Schur and Kornfeld confirm that resection of the antral portion of the stomach checks the stomach secretion. The result is not due to the reduction of the secreting area of the mucosa. Postoperative ulcer is always a peptic ulcer, and the best method of prevention at present is extensive resection of the pyloric antrum. The postoperative disturbances are largely of mechanical origin. This fact affects somewhat the indications for surgical treatment and also calls for improved methods.

Fasting and Purgative Treatment of Dysentery.—Hausmann considers this the only proper treatment in acute dysentery, which is functionally a constipation. Calomel is given once, at the beginning of the treatment, and sodium sulphate as needed several times daily, always 1 tablespoonful to half a glass of water. Calomel and castor oil must precede the sodium sulphate, to intensify its transudation effect. With simultaneous purgation, the fast need last only from three to six days. Plenty of water is given, by infusion if necessary. Death from dysentery results from wrong treatment, adding to the constipating action of the disease. The best prophylaxis is immediate treatment of every diarrhea by combined purgatives and fasting.

Enterogenous Gastric and Duodenal Ulcers.—Posselt discusses general pathologic and special clinical questions relative to enterogenous gastric and duodenal ulcers, particularly those with a dysentery basis. He includes numerous reports of cases, and an international bibliography.

Dermatologische Wochenschrift, Leipzig

80: 281-320 (Feb. 21) 1925

Salicylic Acid and Thymus Extract in Treatment of Psoriasis. K. Schreiner.—p. 281.
Apparatus for Producing Carbon Dioxid Snow. A. Paldrock.—p. 285.
*Etiology of Alopecia Areata. A. Buschke and B. Peiser.—p. 287. Begun, p. 237.
*Amyl Nitrite in Dermatology. F. Winkler.—p. 293. Begun, p. 243.
Treatment of Gonorrhea with Autovaccine. E. Kropp.—p. 298.

Etiology of Alopecia Areata.—From experimental studies as well as clinical observation in fifteen cases Buschke and Peiser assert that alopecia areata is a distinct morbid entity due mainly to central disturbances, probably of endocrine origin.

Curative Action of Amyl Nitrite in Skin Affections.—The curative hyperemia (with or without the following pallor), induced by inhalation of pure amyl nitrite is most pronounced in children with the exudative diathesis. They improve remarkably under it. Winkler prefers to use an amyl nitrite treated with carbon monoxid, as with this the pallor phase

is avoided. Under the amyl nitrite, eczema often seemed to be wiped away at once, with apparent disappearance of the exudation on the surface and in the deeper layers in every case. The arterial hyperemia is the curative factor. Inhalation, whether of the pure amyl nitrite or the modified form, will probably prove equally useful in treatment of skin affections due to intestinal intoxication, those connected with menstruation and pregnancy, and those induced by drugs. Local treatment with amyl nitrite is also promising. It acts on the vasoconstrictor as well as the vasodilator nerves of the cutaneous vessels through the intact skin. The hyperemia of the skin area treated with amyl nitrite lasts about ten minutes and only gradually disappears. It may serve in the diagnosis of vasomotor excitability. By local application in paralysis of the blood vessels, interesting information on the function of the cutaneous vessels and, simultaneously, surprising therapeutic results are obtained, as also in frostbites. Brilliant results follow in urticaria, particularly in relief of the itching, and in senile pruritus. The local asphyxia and acrocyanosis in Raynaud's disease improve under it. Amyl nitrite tests, like the epinephrin tests, deserve a special place in the physiology and pathology of the skin. Local use does not require the modified amyl nitrite, and the commercial amyl nitrite may be employed for diagnostic and therapeutic tests.

Deutsche medizinische Wochenschrift, Berlin

51: 341-380 (Feb. 27) 1925

*Epidemiologic Experiments. F. Neufeld.—p. 341.
*Cytology of Bone Marrow. V. Schilling.—p. 344.
Kidney Function in Retention of Urine. A. Salomon.—p. 348.
*Bacteriophage and Nitrogen Metabolism of Germs. W. Seiffert.—p. 350.
*Flocculation Reactions and the Wassermann Test. J. Schubert.—p. 352.
*The Mátéfy Reaction in Pulmonary Tuberculosis. H. Zwerg.—p. 353.
Sedimentation and Blood Picture in Tuberculosis. S. Müller.—p. 354.
Difference Between Pediculus Capitis and Vestimenti. L. Freund.—p. 358.
*Histology of Roentgen-Ray Erythema. H. T. Schreus.—p. 358.
Iron Treatment. R. Seyderhelm.—p. 359.
Treatment of Vincent's Angina. Birkholz.—p. 362.
"Grasping the Uterine Cervix." Thömel.—p. 362. Idem. Haas.—p. 363.
Lack of Appetite in Children. A. Kaemmerer.—p. 363.
Survey on Cancer Research. Teutschlaender and R. Münzner.—p. 363. Conc'n.
Italian Research on Nutrition and Immunity. Lavalle.—p. 377.

Epidemiologic Experiments.—Neufeld reviews new epidemiologic experiments and observations, especially those of Webster on the constitutional factors and heredity of resistance. Toxic diphtheria bacilli are present in 0.1-0.3 per cent. of healthy subjects who have not been in contact with patients. Meningococci were found in 10-20 per cent. Influenza bacilli are almost ubiquitous. He points out that formerly it would have sounded like an utopia to think of the possibility of preventing the free exchange of typhoid bacilli. He hopes that the present free exchange of the flora of the nasopharynx will not always fatalistically be taken as inevitable.

Cytology of Bone Marrow.—Schilling relates the history and the new results learned in respect to the cytology of the bone marrow. He found with Benzler in the bone marrow of ten healthy men, just shot, an average of 36.6 per cent. of normoblasts, 41.3 neutrophils of all stages, and 2.9 of eosinophils. The percentages in all these men were practically identical, although the blood contained from 32 to 74.5 per cent. of neutrophils. Of the neutrophils in the bone marrow, around 40 per cent. were myelocytes, a little more metamyelocytes, and between 0.2-1 per cent. cells with rod-shaped nuclei. Segmented cells varied between 7 and 22 per cent. He reports the details of Bantz' and Yammamoto's investigations made under his direction. The bone marrow reacts histologically in a characteristic way to stimuli. The degenerative shifting of the "rod-shaped" cells was evident in bone marrow punctates sometimes even better than in the blood slides.

Bacteriophage and the Nitrogen Metabolism of Germs.—Seiffert reports on Okamoto's experiments with bacteriophages. The lytic agent did not multiply if the germs were grown on protein-free mediums. He believes that d'Herelle's phenomenon is due to an activation of autolysis by products of nitrogen metabolism, which are otherwise further decomposed.

Flocculation Reactions and the Wassermann Test.—Schubert regards the hemolysis in complement fixation as a two-stage amplification (*relais*) which is finer and safer than flocculation tests because of the greater distance of the effect from the cause.

The Mátéfy Reaction in Pulmonary Tuberculosis.—Zwerg had better results with the sedimentation test than with the Mátéfy test. The latter was positive in eleven out of eighteen healthy controls.

Histology of Roentgen-Ray Erythema.—Schreus confirms Miescher's observation on amitotic division of cells of the skin—especially of the epithelium, sweat glands and the endothelium of the blood vessels. It occurs in the epithelium even in absence of visible redness.

Klinische Wochenschrift, Berlin

4: 385-432 (Feb. 26) 1925

Tuberculin in Diagnosis and Treatment. G. Bessau.—p. 385.
*Cell Injury by Roentgen Rays. H. Holthusen.—p. 392.
*Surface Tension and Frequency of Metastases. E. Bauer and A. Lasnitzki.—p. 395.
*Pigment Cells in Mesenteric Lymph Nodes. G. Lepehne.—p. 396.
Removal of Diseased Foci in Tuberculosis. H. Hauke.—p. 399.
*Transplantation of Ovaries in Schizophrenia. P. Sippel.—p. 401.
Action of Insulin on the Heart. E. v. Haynal.—p. 403.
*Kahn's Cancer Reaction. F. J. Laux.—p. 405.
"Tabes and Mesaortitis." Frisch.—p. 406. Reply. Kessler.—p. 407.
*Hemolysis and Changes in Shape of Erythrocytes. Heeres.—p. 407.
Does Codein Enhance the Action of Morphin? T. Gordonoff.—p. 408.
*Chlorophyll. T. Gordonoff.—p. 409.
*Hypertension. H. W. Bansi.—p. 409.
*Occupational Affections. L. Teleky.—p. 410.
Differentiation of the Retina. H. Rothschild.—p. 414. Conc'n.

Cell Injury by Roentgen Rays.—Holthusen's experiments indicate that the clamping of the blood vessels before an irradiation delays only the sequelae, but does not reduce the susceptibility of the cells to the roentgen rays.

Surface Tension and Frequency of Metastases.—Bauer and Lasnitzki measured the surface tension of the fluid expressed from normal organs, using both the stalagmometric and the static methods. A lower tension was evident in the organs predisposed to metastasis (liver, lymph glands), and a higher tension in the spleen and muscle.

Pigment Cells in Mesenteric Lymph Nodes.—Lepehne found in two out of eleven cases of pernicious anemia and one case of brain tumor peculiar large cells in the mesenteric lymph glands. The cells contained a pigment which was acid-fast, and accepted Sudan and Nile blue. He regards it as lipofuscin.

Transplantation of Ovaries in Schizophrenia.—Since hypoplasia of the sex organs is found in the majority of schizophrenic women, Sippel made human ovarian grafts in a few such cases. No improvement was noted in one case. Three of the women improved to a surprising extent—one of them so rapidly that he thinks of the possibility of the influence of suggestion.

Kahn's Cancer Reaction.—Laux found Kahn's serologic test for cancer unreliable.

Hemolysis and Changes in Shape of Erythrocytes.—Heeres studied on frogs' erythrocytes the progress of hemolysis by sodium oleate. The cells became longer, then pointed at both ends; after this they grew broader and round before breaking up. The same changes could be found in the blood from the splenic vein.

Chlorophyll.—Gordonoff found that chlorophyll has a stimulating action on isolated organs.

The Hypertension Question.—Bansi describes a case of grave genuine contracted kidney with normal blood pressure and only slightly enlarged heart.

Occupational Affections.—Teleky finds too little interest for occupational diseases. In many fatal carbon monoxid poisonings, evident to any expert, the favorite diagnosis is "heart failure." Exhumation of the body after a few days fails to reveal the carbon monoxid by that time. Lead poisoning is another sad chapter. Some positive diagnoses are incorrect, and many negatives are given in patients suffering from true lead poisoning.